

# **EXHIBIT B40**

Rebecca Smith-Bindman, M.D.

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IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF NEW JERSEY

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IN RE: JOHNSON & JOHNSON TALCUM )  
POWDER PRODUCTS MARKETING, SALES )  
PRACTICES, AND PRODUCTS LIABILITY )  
LITIGATION )  
 ) MDL No.  
 ) 2738 (FLW)(LHG)  
 )  
 )

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VIDEOTAPED DEPOSITION OF  
REBECCA SMITH-BINDMAN, M.D.

San Francisco, California

Thursday, February 7, 2019

Volume I

Reported by:  
MARY J. GOFF  
CSR No. 13427

Rebecca Smith-Bindman, M.D.

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<p>1 2 3 4 5       Videotaped Deposition of REBECCA 6 SMITH-BINDMAN, M.D., Volume I, taken on behalf of 7 Johnson &amp; Johnson, at Levin Simes Abrams LLP, 8 1700 Montgomery Street, Suite 250, San Francisco, 9 California 94111, beginning at 9:20 a.m. and ending 10 at 4:01 p.m., on February 7, 2019, before MARY J. 11 GOFF, California Certified Shorthand Reporter No. 12 13427. 13 14 15 16 17 18 19 20 21 22 23 24 25</p>	<p>1 APPEARANCES (continued): 2 For Plaintiffs 3 Restaino Law LLC 4 BY: JOHN M. RESTAINO JUNIOR 5 Attorney at Law 6 130 Forest Street 7 Denver, Colorado 80220 8 jrestaino@restainollc.com 9 720-891-7921 10 11 For Defendant Johnson &amp; Johnson 12 Tucker Ellis LLP 13 BY: MICHAEL C. ZELLERS 14 Attorney at Law 15 515 South Flower Street 16 42nd Floor 17 Los Angeles, California 90071 18 michael.zellers@tuckerellis.com 19 213-430-3301 20 21 22 23 24 25</p>
<p>1 APPEARANCES: 2 3 For Plaintiffs 4     Beasley Allen Law Firm 5     BY: P. LEIGH O'DELL 6       MARGARET M. THOMPSON, MD, JD, MPAff 7       Attorney at Law 8       218 Commerce Street 9       Montgomery, Alabama 36103 10      leigh.odell@beasleyallen.com 11      334-269-2343 12 For Plaintiffs 13     Robinson Calcagnie, Inc. 14     BY: CYNTHIA L. GARBER 15     Attorney at Law 16     19 Corporate Plaza Drive 17     Newport Beach, California 92660 18     cgarber@robinsonfirm.com 19 For Plaintiffs 20     Wilentz, Goldman &amp; Spitzer P.A. 21     Daniel R. Lapinski 22     Attorney at Law 23     90 Woodbridge Center Drive, 24     Suite 900 Box 10 25     Woodbridge, New Jersey 07095-0958</p>	<p>1 APPEARANCES (continued): 2 For Defendant Johnson &amp; Johnson 3 Skadden, Arps, Slate, Meagher &amp; Flom, LLP. 4 BY: BENJAMIN HALPERIN 5 Attorney at Law 6 4 Times Square 7 New York, New York 10036 8 benjamin.halperin@skadden.com 9 212-735-2453 10 11 For Defendant Imerys 12     Dykema 13     BY: JANE BOCKUS 14     Attorney at Law 15     112 E. Pecan Street 16     Suite 1800 17     San Antonio, Texas 78205 18     jbockus@dykema.com 19     210-554-5549 20 21 22 23 24 25</p>

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<p>1 APPEARANCES (continued):      2 For Defendant Imerys      3 Gordon &amp; Rees LLP      4 BY: JENNIFER A. FOSTER      5 Attorney at Law      6 816 Congress Avenue      7 Suite 1510      8 Austin, Texas 78701      9 jfoster@gordonrees.com      10 512-391-0197      11      12      13 For Defendant PCPC, Personal Care Products Council      14 Seyfarth Shaw, LLP      15 BY: JAMES R. BILLINGS-KANG      16 Attorney at Law      17 975 F Street, NW      18 Washington, D.C. 20004      19 jbillingskang@seyfarth.com      20 202-828-5356      21      22      23      24      25</p>	<p>1 INDEX      2 WITNESS EXAMINATION      3 REBECCA SMITH-BINDMAN, M.D.      4 Volume I      5      6 BY MR. ZELLERS 12      7      8 NUMBER DESCRIPTION PAGE      9 Exhibit 1 Notice of Oral and Videotaped 24          Deposition      10      11 Exhibit 2 Rule 26 Expert Report of 25          Rebecca Smith-Bindman, MD      12      13 Exhibit 3 IMERYS list, Amended Expert Report 30      14      15 (Exhibit 4-11, premarked Hopkins Exhibit 28      16 (Spreadsheet) premarked Pier 47 (Exhibit Number      17 list) and unmarked article "Pycnogenol Reduces      18 Talc-induced Neoplastic Transformation in Human      19 Ovarian Cell Cultures" (Pltf_MISC_00000046) are      20 contained in the blue folder)      21      22 Exhibit 4 Reproductive Sciences 34      23      24 Exhibit 5 Safety Assessment article 35      25</p>
<p>1 APPEARANCES (continued):      2      3 For Defendants PTI Union, LLC and PTI Royston, LLC      4 Tucker Ellis LLP      5 BY: CAROLINE M. TINSLEY      6 Attorney at Law      7 100 South 4th Street`      8 Suite 600      9 St. Louis, Missouri, 63102      10 caroline.tinsley@tuckerellis.com      11      12 Videographer:      13      Joseph Morgas      14      15      16      17      18      19      20      21      22      23      24      25</p>	<p>1 EXHIBITS CONTINUED: PAGE      2 Exhibit 6 IARC Monographs, Volume 93 35      3      4 Exhibit 7 J&amp;J article by Owen Dyer, BMJ 36      5      6 Exhibit 8 IARC Volumes 1-123 36      7      8 Exhibit 9 "On Talc Translocation from the 36          Vagina" article      9      10 Exhibit 10 Alterations in Gene Expression 37          article      11      12 Exhibit 11 Draft Screening Assessment, 12/18 38      13      14 Exhibit 12 (Binder) Talc Articles I 39      15      16 Exhibit 13 (Binder) Talc Articles II 39          (Exhibit 21 is inside Exhibit 13)      17      18 Exhibit 14 CV of Smith-Bindman, MD 53      19 Exhibit 15 List of articles 54      20 Exhibit 16 9/24/18 e-mail string 76          forest plots      21      22 Exhibit 17 Rule 26 Expert Report of 90          Smith-Bindman, MD      23      24 Exhibit 18 The Association Between Talc Use 95          and Ovarian Cancer article      25</p>

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1 EXHIBITS CONTINUED:	PAGE	1 REBECCA SMITH-BINDMAN, M.D., VOLUME I,
2 Exhibit 19 NCI, SEER Training Modules	130	2 being first duly sworn or affirmed to testify to the
3 Risk Factors		3 truth, the whole truth, and nothing but the truth,
4 Exhibit 20 NCI article, Ovarian, Fallopian	132	4 was examined and testified as follows:
5 Tube and Primary Peritoneal		5 EXAMINATION BY COUNSEL FOR THE DEFENDANTS
6 Cancer Prevention PDQ-Health		6 BY MR. ZELLERS:
7 Professional Version		7 Q State your name.
8 Exhibit 21 Handwritten notes	156	8 A Rebecca Smith-Bindman.
9 (Inside Binder Exhibit 13)		9 Q Dr. Bindman, we are here today to take
10 Exhibit 22 Genital Talc Exposure and Risk	179	10 your deposition in the talcum powder MDL litigation.
11 of Ovarian Cancer article		11 Are you aware of that?
12 Exhibit 23 Genital Powder Exposure article	179	12 A I am.
13 Exhibit 24 9/29/18 e-mail string	184	13 Q Have you been deposed before?
14 Exhibit 25 Perineal Talc Exposure article	189	14 A I have.
15 Exhibit 26 Letter to Samuel Epstein, MD	203	15 Q On how many occasions?
16 Exhibit 27 IARC Agents Classified by IARC	206	16 A Three to four times.
17 Monographs, Volumes 1-123		17 Q Have you ever testified at trial?
18		18 A I have.
19		19 Q On how many occasions?
20		20 A One.
21		21 Q You are generally familiar with the rules
22		22 we're going to follow here today?
23		23 A I am.
24		24 Q If at any time I ask you a question or any
25		25 counsel asks you a question that you don't
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1 San Francisco, California		1 understand, please don't answer it. Tell us you
2 February 7, 2019		2 don't understand, and we'll rephrase the question or
3 9:20 a.m.		3 repeat it so it's clear to you.
4		4 Can you do that?
5 REBECCA SMITH-BINDMAN, M.D.,		5 A I can.
6 being first duly sworn or affirmed to testify to the		6 Q If you answer a question, is it fair for
7 truth, the whole truth, and nothing but the truth,		7 us to assume that you understood it?
8 was examined and testified as follows:		8 A It is.
9 THE VIDEOGRAPHER: We are now on the		9 Q Please don't guess or speculate as to any
10 record. My name is Joseph morgue. I'm a		10 answers. If you don't know the answer to a question
11 videographer for Golkow Litigation Services.		11 or it would call you to guess or speculate, tell us.
12 Today's date is February 7, 2019. The		12 Can you do that?
13 time on the video monitor is 9:20 a.m.		13 A I can.
14 This video deposition is being held at		14 Q If at any time you need to take a break as
15 1700 Montgomery Street, Suite 250, San Francisco,		15 we proceed through the day, please tell us. And
16 California, in the matter In Re: Johnson & Johnson		16 once we finish whatever line of questioning we're
17 Talcum Powder Products Marketing, Sales Practices,		17 involved with, then we will take a break.
18 and Products Liability Litigation, for the United		18 A Okay.
19 States District Court, for the District of		19 Q Tell us the times that you have been
20 New Jersey.		20 deposited. When is the last time you were deposed?
21 The deponent is Dr. Rebecca Smith-Bindman.		21 A I think approximately six years ago.
22 Counsel will be noted on the stenographic record.		22 Q What was the litigation or the matter?
23 The court reporter is Mary Goff. She will now		23 A I have been deposed a few times. I'm not
24 administer the oath.		24 sure which happened when --
25		25 Q That's fine.

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<p>1        A -- but I can tell you in general what they 2        were about. 3        Q Tell us -- the three to four times that 4        you have been deposed, will you tell us what each of 5        those matters was? 6        A Yes. I am in addition to being an 7        epidemiologist, I'm a clinical radiologist. And 8        each of those cases had to do with diagnosis and 9        communication within medical malpractice cases. 10       One case had to do with a delayed 11       diagnosis of breast cancer and not communicating 12       results. 13       One case had to do with a misdiagnosis of a 14       first trimester pregnancy loss. 15       One case had to do with misdiagnosis of a 16       complication of a twin/twin pregnancy. I think 17       those are the cases I was deposed in. 18       Q All of the cases in which you have been 19       deposed previously have been medical malpractice 20       cases? 21       A Yes. 22       Q Were those cases in which you had provided 23       treatment to a patient or were they cases in which 24       you were an expert witness independent of that 25       particular plaintiff?</p>	<p>1        A And -- and I was deposed. 2        MS. O'DELL: Excuse me. 3        Q (BY MR. ZELLERS) Yes. So three prior 4        litigations in which you served as an expert and you 5        were deposed; is that right? 6        A I -- 7        MS. O'DELL: Object to the form. I think 8        she said four, but -- 9        MR. ZELLERS: Well, she said three to 10       four. But then when she was telling us about those 11       cases -- 12       A -- so I remember what was fourth case was. 13       Q (BY MR. ZELLERS) All right. What was the 14       fourth case? 15       A There was a case of delay in the diagnosis 16       of an ovarian cancer. 17       Q Where was that case? 18       A Somewhere in the middle of the country. 19       Q When did you testify in that case? 20       A I -- I only testified in a single case. 21       So it -- do you mean deposed? 22       Q Yes. When were you deposed in that case? 23       A I -- sometime between -- all of the cases 24       were sometime between six and 12 years ago. I'm 25       not --</p>
<p>1        A For each of those cases, I was an expert 2        witness. I had never personally been involved in a 3        medical malpractice cases. 4        Q Were each of those cases in the 5        San Francisco area or where were they located? 6        A None of those cases were in the 7        San Francisco area. One of them was in Huntsville 8        Alabama, one was in Northern California, and one was 9        in Southern California. 10       Q Do you remember the names of any of those 11        cases? 12       A I do not. 13       Q Do you remember the name of the lawyer or 14        lawyers that you worked with in those cases? 15       A I do not. 16       Q Did you testify in those cases on behalf 17        of the plaintiff or on behalf of a defendant? 18       A They were split. So I have been involved 19        in cases on both sides. 20       Q Well, my understanding is you have been 21        involved in three prior litigations; is that right 22       -- 23       MS. O'DELL: Object to the form. 24       Q (BY MR. ZELLERS) -- in which you served as 25        an expert witness and were deposed?</p>	<p>1        Q All right. Did -- 2        A -- sure I remember the years. 3        Q The case in which you testified as an 4        expert witness in the delay of diagnosis of ovarian 5        cancer, were you testifying for the defense or for 6        the plaintiff? 7        A I believe that case was for the defense. 8        Q Do you remember the name of the plaintiff? 9        A I do not. 10       Q Do you remember the name of the defendant? 11       A I do not. 12       Q Do you remember the name of the attorney 13        who retained you? 14       A I do not. 15       Q Do you remember where in the middle of the 16        country that case was pending? 17       A I do not. 18       Q You stated that you have testified one 19        time at trial; is that right? 20       A Yes. 21       Q Where did you testify at trial? 22       A That was Huntsville -- the Fayetteville, 23        Alabama case. 24       Q In that case, did you testify for the 25        plaintiff or the defense?</p>

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<p>1 A For the plaintiff. 2 Q Do you remember how long ago it was? 3 A In the ballpark of seven or eight years 4 ago. 5 Q The Northern California case that you gave 6 deposition testimony in that -- in, was that for the 7 plaintiff or the defense? 8 A I don't remember. 9 Q Southern California, that medical 10 malpractice case, did you testify for the plaintiff 11 or the defense? 12 A Can I go back? I -- I do remember. 13 So the Northern California case was the 14 plaintiff. The Southern California case was the 15 defense. 16 Q Do you remember the attorneys that you 17 worked with in the Northern California case? 18 A I do not. 19 Q The Southern California case? 20 A I do not. 21 Q Do you remember the name of any of the 22 parties in any of the cases in which you have either 23 given deposition testimony in or trial testimony in? 24 A I do not. 25 Q Today I'm going to ask you questions about</p>	<p>1 A Yes. 2 Q You are not testifying here today as a 3 radiologist; is that right? 4 MS. O'DELL: Object to the form. 5 A I think some of my experiences as a 6 radiologist are highly relevant to my expertise, and 7 so there are some questions that I think that that 8 is very relevant. 9 Q (BY MR. ZELLERS) Are there any areas in 10 which you anticipate providing expert testimony in 11 this litigation, other than in the areas of 12 epidemiology and radiology? 13 MS. O'DELL: Object to the form. 14 A I mentioned ovarian cancer. So risk 15 factors for ovarian cancer falls into epidemiology. 16 The mechanism of ovarian cancer, the 17 pathophysiology, the biological processes are not 18 technically epidemiology. They're related, and so 19 some of my opinions, I think, would fall into that 20 category. 21 Q (BY MR. ZELLERS) How would you define that 22 area of expertise for which you are providing expert 23 opinions? 24 MS. O'DELL: Object to the form. 25 Q (BY MR. ZELLERS) We have got that you are</p>
<p>1 talcum powder or baby powder. Can we agree that 2 when I refer during the deposition to products, to 3 talc products, talcum powder products, baby powder, 4 or Shower to Shower at issue in this MDL, that I am 5 referring to the baby powder product manufactured by 6 Johnson &amp; Johnson Consumer Products, Inc., and the 7 Shower to Shower product that was formerly 8 manufactured by Johnson &amp; Johnson Consumer Products, 9 Inc.? 10 A Yes. 11 Q How would you define the area of expertise 12 in which you were offering opinions in this case, 13 "this case" being the talc MDL? 14 A I was asked to provide an expert review in 15 the area of epidemiology, ovarian cancer and its 16 causes, the health effects of talc powder products. 17 I think those are the main areas. 18 Q Are -- are you testifying today as an epidemiologist? 19 A Yes. 20 MS. O'DELL: Object to -- 21 A Am -- 22 MS. O'DELL: -- the form. 23 A -- I bringing expertise to that? 24 Q (BY MR. ZELLERS) Yes.</p>	<p>1 going to provide expert opinions relating to 2 epidemiology. You're going to provide expert 3 opinions relating to radiology. 4 Are there any other areas that you intend 5 to provide expert opinions in? 6 MS. O'DELL: Other than what she has just 7 described? 8 Q (BY MR. ZELLERS) Well, other than 9 epidemiology and radiology. 10 MS. O'DELL: Object to the form. She gave 11 another -- a host -- a suite of things she expected 12 to testify on, but -- 13 MR. ZELLERS: And so -- 14 MS. O'DELL: -- I'll object to the form. 15 MR. ZELLERS: -- yeah, thank you. 16 A Could you repeat back to me what I have 17 already said? 18 Q (BY MR. ZELLERS) No. I'm asking you what 19 you are going to provide expert testimony in, what 20 you consider yourself to be an expert in. 21 I understand epidemiology, and I 22 understand the epidemiology opinions you are going 23 to give, relate to whether or not talcum powder is 24 associated with ovarian cancer, whether or not 25 talcum powder causes ovarian cancer, so I believe</p>

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<p>1 those are epidemiology-based opinions. 2 I also understand that you have a -- your 3 training and your background is in radiology and 4 that you will provide, to the extent relevant, 5 radiology opinions. 6 But you're not testifying here today as a 7 gynecologic oncologist, are you? 8 A I am not. 9 Q You are not testifying here today as an 10 expert in asbestos; is that fair? 11 MS. O'DELL: Object to the form. 12 A I am going to provide opinions, if asked, 13 about the health effects of asbestos. 14 Q (BY MR. ZELLERS) Are you an expert or do 15 you consider yourself to be an expert in asbestos? 16 MS. O'DELL: Object to the form. 17 A The question is about asbestos, in 18 general, and I consider myself an expert on the 19 health effects of asbestos. 20 Q (BY MR. ZELLERS) Does that mean that you 21 are an expert in asbestos or simply looking at 22 studies that have evaluated the epidemiology of 23 asbestos and asbestos exposure to certain 24 conditions? 25 MS. O'DELL: Object to the form.</p>	<p>1 Q -- not an expert -- well -- and let me 2 withdraw that. 3 You have produced an expert report in this 4 case; is that right? 5 A I have. 6 Q Let's mark a couple of things at the 7 outset. 8 Deposition Exhibit 1 is copy of the Notice 9 of Deposition. 10 (Exhibit 1 was marked for identification 11 and is attached to the transcript.) 12 MS. O'DELL: Thank you. 13 Q (BY MR. ZELLERS) Have you seen the Notice 14 of Deposition prior to today? 15 A Yes, I have. 16 Q Have you either brought with you or 17 through counsel have they brought all of the 18 materials that you believe are responsive to the 19 Deposition Notice? 20 MR. ZELLERS: And, Ms. O'Dell, I recognize 21 that you have objected to the Deposition Notice and 22 the record will reflect that. 23 MS. O'DELL: And just so I have a chance 24 to say something, we'll just reassert those 25 objections now.</p>
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<p>1 A I think there are a lot of acts -- aspects 2 of asbestos, so I would absolutely not consider 3 myself an expert on the geology of asbestos or in 4 the mechanism of mining asbestos. 5 But I would consider myself an expert on 6 the changes to the body that can be the result of 7 exposure to asbestos in the context of epidemiology 8 studies, but also in the context of molecular 9 changes, cellular changes like that. 10 And -- and those technically are probably 11 not in the category of epidemiology, but would 12 overlap other areas of my training and experience, 13 such as pathology and... 14 Q You are not an expert in the testing of 15 asbestos; is that fair? 16 A I -- I would, yes, agree. 17 Q You are not an expert in the different 18 forms and types of asbestos -- 19 A I -- 20 Q -- correct? 21 A -- I -- correct. 22 Q Okay. 23 A I'm not an expert in those types of -- 24 Q You are -- 25 A -- asbestos.</p>	<p>1 Dr. Smith-Bindman has brought with her 2 documents subject to our objections. 3 MR. ZELLERS: And I would really like 4 Dr. Smith-Bindman to answer the question. 5 MS. O'DELL: I'm sure she's ready to do 6 that. 7 A To the best of my knowledge, I have 8 responded or brought or provided all of -- 9 Q (BY MR. ZELLERS) You -- 10 A -- those items. 11 Q -- you are not aware of items that are 12 called for in the Deposition Notice, what we have 13 marked as Exhibit 1 that have not been produced or 14 not available here today; is that right? 15 A That's correct. 16 Q Ms. O'Dell and I spoke earlier about your 17 invoices, and apparently you do have some invoices 18 relating to your work in this matter. At some point 19 today we'll collect those and we will mark those. 20 (Exhibit 2 was marked for identification 21 and is attached to the transcript.) 22 Q (BY MR. ZELLERS) Deposition Exhibit 2 is 23 your report in this matter; is that right? 24 MS. O'DELL: Thank you. 25 A Okay. Yes.</p>

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<p>1       Q (BY MR. ZELLERS) Does your report in this 2 matter, Deposition Exhibit 2, contain all of the 3 opinions that you intend to offer at trial or at any 4 hearing in this matter?</p> <p>5       A The report summarizes my opinions. I have 6 written in the report. As new information comes 7 available, I may take that into account as well.</p> <p>8       So when we began, counsel mentioned a few 9 additional papers that I had seen since the time my 10 report was written. And so those are -- are -- 11 won't -- have not changed my views, but those are 12 not necessarily referenced in this report.</p> <p>13      Q In terms of your opinions and the opinions 14 that you expect to render in this matter, either at 15 trial or any hearing, those opinions are contained 16 in your report which we marked as Exhibit 2, 17 correct?</p> <p>18      MS. O'DELL: Object to the form.</p> <p>19      A I have not, since writing my report, seen 20 any documents that have changed my opinions. 21       But as I continue to keep up with the 22 published literature, my opinions may reflect 23 changing documents that I have seen since the time 24 my report was generated.</p> <p>25</p>	<p>1       Q Okay. Right now all I want to do is get a 2 list of what you have looked at and considered since 3 you prepared your report.</p> <p>4       A I have seen an updated testing report by 5 Mr. Longo.</p> <p>6       I have seen a report and deposition by 7 Mr. Cooke. I -- I think those are the...</p> <p>8       Q You -- counsel for Plaintiffs, Ms. O'Dell, 9 told me before the deposition that you also have 10 looked at a health assessment from Health Canada or 11 a risk assessment; is -- is that correct?</p> <p>12      A Yes, that's correct.</p> <p>13      Q All right. Did you also look at a 14 meta-analysis that was performed or at least the 15 draft of a meta-analysis by the first name, author, 16 Thayer (phonetic)?</p> <p>17      A I -- I saw that report briefly.</p> <p>18      Q Anything else that you have reviewed 19 and/or considered that is not included in the 20 materials that you reference either in your list of 21 references or in your Materials Considered List?</p> <p>22      A There was also a series of reports in -- 23 in The New York Times and Reuters and a summary of 24 that in the BMJ, which I have seen since I have 25 issued my report.</p>
<p>1       Q (BY MR. ZELLERS) All I can do is ask you 2 questions today. As of today, does your report 3 contain the opinions that you expect to provide at 4 any trial or hearing in this matter?</p> <p>5       A Yes, they do.</p> <p>6       Q My understanding from one of your prior 7 answers is that you have reviewed some additional 8 materials since you prepared and signed your report 9 on or about November 15 of 2018; is that right?</p> <p>10      A That is correct.</p> <p>11      Q Those materials, you believe, support the 12 opinions that you have put in your report, but have 13 not changed your opinions; is --</p> <p>14      A It --</p> <p>15      Q -- that right?</p> <p>16      A -- that's correct.</p> <p>17      Q What new or additional materials have you 18 reviewed and considered since preparing your report 19 on November 15, 2018?</p> <p>20      A So I have seen a draft of a publication -- 21 submitted for publication by Dr. Saed about the 22 cellular and molecular changes to cell lines of 23 being exposed to various talcum powder products, 24 which I think is an important paper that has 25 influenced my views.</p>	<p>1       Q Are you basing any of your opinions on the 2 Reuters or New York Times articles?</p> <p>3       A Those reports support my opinions, but no, 4 I'm not basing my report on -- on those.</p> <p>5       Q Ms. O'Dell also provided me with a list 6 materials that she has represented that you have 7 reviewed since you prepared your report.</p> <p>8       It's a series of Imerys documents. It's 9 one J&amp;J produced document. And then the last item 10 listed is an Amended Expert Report of Robert Cooke.</p> <p>11      Have you reviewed those materials since 12 preparing your report?</p> <p>13      A So yes, the -- the Mr. Cooke report, which 14 is one I mentioned. Yes, I have seen the Imerys 15 report. And I can't remember what you said, the 16 Johnson &amp; Johnson?</p> <p>17      Q Are those additional documents or 18 materials that you have reviewed since preparing 19 your report?</p> <p>20      A I'm sorry. I understand the question. I 21 don't remember what the Johnson &amp; Johnson material 22 was.</p> <p>23      Q I --</p> <p>24      A You listed it. I just don't --</p> <p>25      Q -- well, I didn't --</p>

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<p>1 A -- remember that. 2 Q -- list it. This was a list that was 3 prepared and provided to me by counsel for 4 Plaintiffs so -- 5 MS. O'DELL: But I don't think he 6 characterized the documented in any way other than 7 the Bates number, so -- so it's a J&amp;J document -- 8 A What is that item? 9 MS. O'DELL: -- that's just the Bates 10 number for that particular document. And it's 11 the -- the test results that you reviewed yesterday. 12 A Yes. 13 (Exhibit 3 was marked for identification 14 and is attached to the transcript.) 15 Q (BY MR. ZELLERS) Are all of the documents 16 contained on Exhibit 3, the -- a listing that was 17 put together by counsel for the Plaintiffs, 18 documents that you reviewed yesterday in preparation 19 for your deposition today? 20 A Yes. 21 Q Are those documents that were selected by 22 plaintiffs' counsel to show you to help prepare you 23 for the deposition? 24 MS. O'DELL: Object to the form. 25 A The document are ones that I asked for to</p>	<p>1 is that right? 2 A Yes, I did. 3 MS. O'DELL: Object to the form. 4 Q (BY MR. ZELLERS) You asked for documents 5 that were both positive and negative relating that 6 testing; is that right? 7 A Yes. 8 Q Do you believe that you have now seen, as 9 part of your review, all documents relating to the 10 testing of Johnson's baby powder and/or Shower to 11 Shower powder? 12 A I -- 13 MS. O'DELL: Object to the form. 14 A -- I do not believe I have seen the 15 entirety of the testing results. 16 Q (BY MR. ZELLERS) Was it your request that 17 you see whatever pertinent documents that were 18 relating to the testing of the baby powder? 19 A It was not my request. I wanted to 20 understand, in general, what kind of testing had 21 been done. I -- I was not planning to delve into 22 the entirety of testing. 23 Q Any other materials that you have reviewed 24 prior -- strike that -- subsequent to preparing your 25 report, which we marked as Exhibit 2?</p>
<p>1 see testing results, both positive and negative, 2 from Johnson &amp; Johnson. So I requested documents 3 that would show that, and I believe that's what each 4 of these were provided for. 5 Q When did you make that request to 6 plaintiffs' counsel? 7 MS. O'DELL: And Mr. Zellers is -- he can 8 ask you when you made the request. In terms of the 9 specifics of the request or conversations with 10 counsel, those would be protected, and I would 11 instruct you not to -- to disclose those. 12 A To not say when I read the request? 13 MS. O'DELL: You can say when you gave the 14 request. But the substance of the request or the 15 substance of the discussions, I would have ask you 16 not to -- 17 A Okay. 18 MS. O'DELL: -- testify to those. 19 Q (BY MR. ZELLERS) My question again is: 20 When did you make the request for the documents that 21 are identified on Exhibit 3? 22 A I believe it was a few weeks ago. 23 Q You made a request for testing documents 24 of talcum powder used in Johnson &amp; Johnson Consumer, 25 Inc., baby powder or former Shower to Shower powder;</p>	<p>1 A None that come to mind. 2 Q You have brought with you here today 3 several notebooks and it looks like a blue folder; 4 is that right? 5 A Yes. 6 Q What is contained in the blue folder that 7 you brought here today? 8 A Primarily in the blue folder are either 9 additional documents that I have reviewed since I 10 wrote my report, but also a few documents that -- in 11 preparation for the deposition, I went through my 12 report and pulled some articles to look at in 13 greater depth, and so I brought those with -- 14 Q So -- 15 A -- me. 16 Q -- in the blue folder are materials that 17 you pulled out to have available for the deposition 18 today for your use as needed in responding to 19 questions that were asked? 20 A Yes, that's correct. 21 Q Can I see your blue folder, please? And, 22 Dr. Smith-Bindman, have you taken any medications 23 that impair your ability to answer questions today? 24 A I have not. 25 Q All right. The first document in your</p>

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<p>1 blue folder is a document, "Reproductive Sciences" 2 at the top, "Molecular basis Supporting the 3 Association of Talcum Powder Use with Increased Risk 4 of Ovarian Cancer." 5       The first named author is Nicole Fletcher. 6       And is this the article by Dr. Saed that 7 you sold me about? 8       A Yes, it is. 9       Q There are a number of notes and 10 highlighting that are contained in the document. 11 Are all of those your notes and highlighting? 12       A They are. 13       Q We'll mark your copy of Dr. Saed's paper 14 as Exhibit 4. 15       (Exhibit 4 was marked for identification 16 and is attached to the transcript.) 17       Q (BY MR. ZELLERS) The next paper in your 18 blue folder that you brought here today is a 19 document with the first named author, Fiume, 20 F I U M E. The title is "Safety Assessment of Talc 21 as Used in Cosmetics." 22       It appeared in the International Journal 23 of Toxicology. Again, there's highlighting in the 24 document and underlying lining. 25       Did you do the highlighting and did you do</p>	<p>1       Are those your notations? 2       A Yes, they are. 3       Q All right. We'll mark that as Exhibit 7. 4       (Exhibit 7 was marked for identification 5 and is attached to the transcript.) 6       (Exhibit 8 was marked for identification 7 and is attached to the transcript.) 8       Q (BY MR. ZELLERS) Exhibit 8 are the 9 classifications of the International Agency for 10 Research on Cancer or IARC. 11       Are you generally familiar with the IARC 12 classifications relating to the carcino -- 13 carcinogenicity of different agents? 14       A I am. 15       Q The next document in your folder that also 16 has some underlining and highlighting is on "Talc 17 Translocation from the Vagina to the Oviducts and 18 Beyond." 19       (Exhibit 9 was marked for identification 20 and is attached to the transcript.) 21       Q (BY MR. ZELLERS) This is an article that 22 was published in 1985. The first named author is 23 A.P. Wehner. 24       Is this also a document that you brought 25 here today?</p>
<p>1 the underlining in this document? 2       A Yes, I did. 3       Q We'll mark that document, your copy, as 4 Exhibit 5. 5       (Exhibit 5 was marked for identification 6 and is attached to the transcript.) 7       Q (BY MR. ZELLERS) I see here that there is 8 the IARC monograph dated 2010 on the evaluation of 9 carcinogenic risk to humans. 10       The bottom part of page 1 is torn off. Do 11 you know why that is? 12       A I do not. 13       Q All right. So the first page gives a date 14 reference of 2010. The second page gives -- well, 15 it also lists a 2006 date and a 2010 date. There is 16 highlighting throughout. 17       Whose highlighting is contained in the 18 document that we'll mark as Exhibit 6? 19       A That would be mine. 20       (Exhibit 6 was marked for identification 21 and is attached to the transcript.) 22       Q (BY MR. ZELLERS) We then have a news 23 article from the British Medical Journal that was 24 published December 28 of 2008. It's just a one-page 25 document with underlining and writing on it.</p>	<p>1       A It is. 2       Q The highlighting in the document, is that 3 your document -- strike that. 4       Is that your highlighting? 5       A It -- it is. 6       Q Are all of these documents either on your 7 reference list or on your Materials Considered List, 8 other than what you told us about at the start of 9 the deposition? 10       A Yes. 11       Q We have Deposition Exhibit 47 from the 12 Pier deposition. I will not mark that. 13       We have an article here by Shukla, 14 S H U K L A, "Alterations in Gene Expression in 15 Human Mesothelial Cells Correlate with Mineral 16 Pathogenicity." 17       (Exhibit 10 was marked for identification 18 and is attached to the transcript.) 19       Q (BY MR. ZELLERS) Is that a document that 20 you brought here today? 21       A Yes, it is. 22       Q Are the highlights and writing on that 23 document yours? 24       A Yes, they are. 25       Q You have an article by Biz'Zard that was</p>

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<p>1 published in -- is that -- Phytotherapy Research, 2 2007; is that right? 3 A Yes. 4 Q There do not appear to be any handwriting 5 on that document, so I won't mark it. 6 We have got the Hopkins Deposition 7 Exhibit 28. There's no highlighting on that 8 document. 9 And then we have the "Draft Screening 10 Assessment" from Health Canada dated December 2018. 11 Is the highlighting in that document 12 yours? 13 A Yes, it is. 14 Q All right. We'll mark that as 15 Deposition Exhibit 11. 16 (Exhibit 11 was marked for identification 17 and is attached to the transcript.) 18 Q (BY MR. ZELLERS) Have we covered all of 19 the documents that you have brought with you today 20 in your blue folder? 21 A Yes. 22 Q All right. Let me see your two notebooks 23 that you also have brought with you today. One 24 notebook is "Talc Articles I." The second notebook 25 is "Talc Articles II."</p>	<p>1 Q Did you have any staff that helped you in 2 terms of your review of materials and preparation of 3 your report other -- other than Dr. Hall? 4 A I had a copy editor -- once I had a draft 5 of my report -- review it. 6 Q Who is your copy editor? 7 A Her name is Chris Tachibana. 8 Q And where is she employed? 9 A She is a freelance medical copy editor. 10 Q What role did she play in your review and 11 analysis of materials and your -- the preparation of 12 your report? 13 A So she played no role in the review -- or 14 the drafting of the report, but she reviewed a draft 15 near the end for grammatical issues to remove 16 redundancy. 17 She's someone I work with a great deal for 18 my medical publications, and so -- 19 Q You have worked with her in the past -- I 20 -- 21 A That's right -- 22 Q -- is that right? 23 A -- yes. 24 Q Is she here in the San Francisco area? 25 A She is not.</p>
<p>1 Are all of the articles that are contained 2 in these two notebooks, articles that are contained 3 either on your reference list or on your reliance 4 materials list? 5 A Yes, they are. 6 Q As I go through this quickly, it appears 7 that there is underlining and highlighting of the 8 articles that you have brought here today; is that 9 right? 10 A Yes, it is. 11 Q Is all of the highlighting and underlining 12 and marking, are those your highlights and marking? 13 A Yes, they are. 14 Q Who prepared the notebooks? And let's 15 mark Talc Articles I, the entire notebook as 16 Exhibit 12. 17 (Exhibit 12 was marked for identification 18 and is attached to the transcript.) 19 Q (BY MR. ZELLERS) Talc Articles II, the 20 entire notebook, as Exhibit 13. 21 (Exhibit 13 was marked for identification 22 and is attached to the transcript.) 23 Q (BY MR. ZELLERS) Who prepared Exhibits 12 24 and 13 for you? 25 A I did.</p>	<p>1 Q Where is she located? 2 A She splits her time between Seattle, 3 Washington, and Germany. 4 Q She charges for her services; is that 5 right? 6 A She does. 7 Q Are those charges that you paid or that 8 were paid by plaintiffs' counsel? 9 A They have not yet been paid, but the plan 10 is for her to submit those invoices. And it will 11 come out of my fees, but will be paid by the 12 counsel. 13 Q All right. When you submit invoices, 14 will -- the charges for the copy editor, will those 15 be included in your invoice to plaintiffs' counsel? 16 A My plan is for it to come out of my fee. 17 So I am paying for it, but it should be literally 18 paid by counsel, since I'm not able to pay and 19 deduct taxes or pay taxes or -- or so -- or... 20 Q All right. You will pay it out of your 21 pocket and will not include it on your statement to 22 plaintiffs' counsel; is that right? 23 A That's correct. 24 Q Approximately how much have you paid or 25 will you pay to your copy editor?</p>

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<p>1       A I believe the total is in the ballpark of 2       about 1,500 or \$1,700. 3       Q How about Dr. Hall? Are her fees being 4       paid by you or are they being paid by plaintiffs' 5       counsel? 6       A Her fees are being paid by counsel. 7       Q Dr. Hall either has or will submit her own 8       separate invoice relating to her work on this 9       matter? 10      A Yes. 11      Q Has she already done that? 12      A I believe she has submitted it. I -- I'm 13      not 100 percent sure. 14      Q Do you know what Dr. Hall's fees are at 15      least through the present time relating to her work 16      on this matter? 17      A I believe the amount is in the ballpark of 18      the same 1,500 to \$2,000. 19      Q You believe, though, that Dr. Hall either 20      has or will be submitting invoice -- an invoice 21      separately for her work to plaintiffs' counsel; is 22      that right? 23      A Yes. 24      Q You have submitted invoices; is that 25      right?</p>	<p>1       Q What did that lawyer tell you or ask you 2       about this engagement? 3       A They told me that there was a -- a case 4       that they would like some epidemiology research on 5       and that they thought I would be a very good fit and 6       would I be willing to speak with them. 7       I don't believe they even told me what the 8       content of -- of the case was about, but rather, 9       that it was a case. And the role that they were 10      seeking was as an epidemiologist, not as a 11      radiologist or on the medical care. 12      Q Was this a phone call or an e-mail or how 13      did they contact you? 14      A I believe it was a short e-mail followed 15      by a short phone call. 16      Q I mean, do you keep those e-mails? And if 17      at some point we ask for them to be produced, is 18      that something you could do? 19      A For the particular e-mail that you are 20      asking about, I cannot find it. So I don't have 21      that. I looked. 22      Q You were contacted by a lawyer or law 23      firm, asked if you would be willing. 24      You said you would be willing without even 25      knowing what the matter related to?</p>
<p style="text-align: center;">Page 43</p> <p>1       A I have. 2       Q When were you first retained in this 3       matter -- well, strike that. 4       When were you first contacted with 5       respect to this litigation, the talcum powder MDL? 6       A My recollection is mid-2017. 7       Q Who contacted you in mid-2017? 8       A I was initially contacted by a law firm 9       that I believe was helping the law firms find expert 10      witnesses and asked if I would be willing to speak 11      with them to see if this could be something that I 12      would be interested in doing. 13      Q What law firm or lawyer contacted you 14      initially in mid-2017? 15      A I -- I don't remember that initial 16      contact. 17      Q You don't remember the name of the lawyer 18      or the law firm that initially contacted you in this 19      matter? 20      A The initial law firm basically asked me if 21      I would be willing to speak to these lawyers, and I 22      do not know the name of that lawyer who originally 23      contacted me. 24      Q Did you ever speak to that lawyer again? 25      A No.</p>	<p style="text-align: center;">Page 45</p> <p>1       A I didn't say I would be willing to be an 2       expert. I said I would be willing to have a 3       conversation with the lawyers to learn about the 4       case. 5       Q Were you told at that time that the case 6       related to talcum powder? 7       A I was not. 8       Q Were you told at that time that the 9       medical issue in the case related to ovarian cancer? 10      A I do not believe I was. 11      Q What is the next contact then that you had 12      with any lawyer relating to this matter? 13      A So then a phone call was set up between 14      myself and, I believe it was, three lawyers involved 15      in this litigation and told about the -- what the -- 16      what the case was about and told what they were 17      looking for to see if I would be interested in 18      speaking with them. 19      And that lead to an in-person meeting 20      where we then discussed what the case was about. 21      Q When was the phone call with the three 22      attorneys? 23      A All of this was in mid-2017, June-July 24      time frame. 25      Q The same question. When was the in-person</p>

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<p>1 meeting?</p> <p>2 A Within that same -- maybe a month later,</p> <p>3 but same time frame.</p> <p>4 Q Was the in-person -- strike that.</p> <p>5 Where was the in-person meeting?</p> <p>6 A It was in my office in San Francisco.</p> <p>7 Q Who were the three attorneys that you</p> <p>8 spoke with initially over the phone and then met</p> <p>9 with in person?</p> <p>10 A So Dr. Thompson was one; John Restaino was</p> <p>11 one; and a third lawyer whose name is alluding me.</p> <p>12 Q Was it a man or a woman?</p> <p>13 A A woman.</p> <p>14 Q Is it a lawyer that you have had any</p> <p>15 further contact with or communications with?</p> <p>16 A Yes.</p> <p>17 Q But you can't remember her name?</p> <p>18 A I can't. But if we give it a minute, I</p> <p>19 think I will be able to.</p> <p>20 Q Well, if you do remember it at some point</p> <p>21 today, let us know.</p> <p>22 When you had the phone call with</p> <p>23 Ms. Thompson and with Mr. Restaino and this third</p> <p>24 lawyer in the in-person meeting, what did they ask</p> <p>25 you to do?</p>	<p>1 Q (BY MR. ZELLERS) You understood they</p> <p>2 represented the Plaintiffs in this litigation --</p> <p>3 A Yes.</p> <p>4 Q -- is that right?</p> <p>5 A Yes.</p> <p>6 Q You told them that you would be willing to</p> <p>7 do the review. You did not at that point agree to</p> <p>8 serve as an expert witness for the Plaintiffs; is</p> <p>9 that fair?</p> <p>10 A That's fair.</p> <p>11 Q Did you then go and do your review,</p> <p>12 literature review?</p> <p>13 A Yes, I did.</p> <p>14 Q You, at least at that point in time, had</p> <p>15 never previously done any research or review</p> <p>16 relating to talcum powder or relating to any</p> <p>17 potential association between talcum powder,</p> <p>18 perineal talcum powder use, and ovarian concern; is</p> <p>19 that right?</p> <p>20 A That's correct.</p> <p>21 MS. O'DELL: Object to the form.</p> <p>22 Q (BY MR. ZELLERS) You went out and reviewed</p> <p>23 the literature; is that right?</p> <p>24 A Yes.</p> <p>25 Q Did plaintiff's counsel, the two lawyers</p>
<p>1 A They asked me if I would be willing to do</p> <p>2 a comprehensive and unbiased review of the</p> <p>3 literature around talcum powder products and ovarian</p> <p>4 cancer.</p> <p>5 Q Did they ask you to do anything else?</p> <p>6 A Well, they asked if I would be willing to</p> <p>7 be an expert witness in this case.</p> <p>8 Q Anything else?</p> <p>9 A Nothing else that I can recall.</p> <p>10 Q You said you would do a review of the</p> <p>11 literature, correct?</p> <p>12 A I -- yes --</p> <p>13 Q You --</p> <p>14 A -- I did.</p> <p>15 Q -- you said that you would be willing to</p> <p>16 serve as an expert for Plaintiffs, correct?</p> <p>17 MS. O'DELL: Object to the form.</p> <p>18 A I -- I hesitated on the last question</p> <p>19 because I was very upfront and clear that I was</p> <p>20 willing to do a review, but that I did not know this</p> <p>21 field in any great depth and that I would only be</p> <p>22 interested in doing that if I was permitted to do</p> <p>23 the review the same as I do in my other scientific</p> <p>24 work and that I didn't know if my conclusion would</p> <p>25 support my becoming an expert on their behalf.</p>	<p>1 that you met -- well, strike that.</p> <p>2 The three lawyers you met with, did they</p> <p>3 provide you with some articles to get started with?</p> <p>4 A They provided access to a database, a</p> <p>5 Dropbox, where they had a large number of articles</p> <p>6 that they made available to me.</p> <p>7 Q You reviewed those articles. Did you then</p> <p>8 have another meeting or communication with the</p> <p>9 plaintiffs' lawyers?</p> <p>10 MS. O'DELL: Object to the form.</p> <p>11 A I had several meetings with the lawyers</p> <p>12 over the subsequent year.</p> <p>13 Q (BY MR. ZELLERS) Eventually were you</p> <p>14 asked, you know, to render an opinion on a topic or</p> <p>15 topics?</p> <p>16 MS. O'DELL: Object to the form.</p> <p>17 A I -- I was asked to draft a report of my</p> <p>18 review of the -- the literature and the data that</p> <p>19 were available.</p> <p>20 Q (BY MR. ZELLERS) At this time were there</p> <p>21 any new lawyers that you were meeting with on the</p> <p>22 plaintiffs' side or was it still the three original</p> <p>23 lawyers?</p> <p>24 A They were -- I -- I believe those would</p> <p>25 be -- I think there was one additional lawyer</p>

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<p>1       that --</p> <p>2       Q   Do you remember his or her name?</p> <p>3       A   Her name. Breanne was her first name.</p> <p>4       Q   Do you know Breanne's last name?</p> <p>5       A   Maybe Cope or something that's similar to</p> <p>6       Cope.</p> <p>7       Q   You reviewed the articles. You were asked</p> <p>8       then by Plaintiffs to write up something relating to</p> <p>9       the articles; is that right?</p> <p>10      A   Yes.</p> <p>11      MS. O'DELL: Object to the form.</p> <p>12      Q   (BY MR. ZELLERS) At some point did either</p> <p>13       you suggest or the plaintiff lawyers ask you to form</p> <p>14       certain opinions relating to this matter?</p> <p>15      MS. O'DELL: Object to the form.</p> <p>16      A   I'm not -- I'm not sure what you mean,</p> <p>17       "form opinions."</p> <p>18      Q   (BY MR. ZELLERS) You met with the lawyers;</p> <p>19       is that right, after you had done your literature</p> <p>20       review?</p> <p>21      A   Yes.</p> <p>22      Q   You had not yet agreed to be an expert</p> <p>23       witness for the Plaintiffs; is that right?</p> <p>24      A   Yes.</p> <p>25      Q   After you had done your literature review,</p>	<p>1       better than what you have already done?</p> <p>2       A   No.</p> <p>3       Q   As part of serving as an expert for</p> <p>4       Plaintiffs, you did an -- either A -- do you call it</p> <p>5       a systematic review or a meta-analysis? What do you</p> <p>6       call that?</p> <p>7       A   I call it a systematic review.</p> <p>8       Q   What's the difference between a systematic</p> <p>9       review and a meta-analysis?</p> <p>10      A   I -- I don't think there's any difference.</p> <p>11       They're -- they're both trying to describe an</p> <p>12       unbiased, quantitative review of the medical</p> <p>13       literature.</p> <p>14      Q   Did -- your systematic review that you</p> <p>15       did, you did that after you had done this review of</p> <p>16       the literature, fair?</p> <p>17      MS. O'DELL: Object to the form.</p> <p>18      A   My systematic review grew out of my</p> <p>19       reading the literature and realizing that there was</p> <p>20       a real gap, which I thought needed to be filled.</p> <p>21       And I chose to do that.</p> <p>22      Q   (BY MR. ZELLERS) I will today, you know,</p> <p>23       ask you some more detailed questions about that.</p> <p>24       Let me make sure I have covered by basics here.</p> <p>25       Your report includes as attachments, a</p>
<p>1       did the plaintiffs' lawyer say: Well,</p> <p>2       Dr. Smith-Bindman, do you have an opinion as to</p> <p>3       whether or not there's an association between</p> <p>4       perineal talcum powder use and ovarian cancer?</p> <p>5       A   I don't remember any such conversation.</p> <p>6       I -- I think from the very beginning the lawyers</p> <p>7       were guessing that I was going to feel strongly that</p> <p>8       there's a strong association. So I don't remember</p> <p>9       being retained as an expert after my report came</p> <p>10       out.</p> <p>11       At -- at some point I think it became</p> <p>12       clear to them when I explained my views that they</p> <p>13       would like to have me be an expert.</p> <p>14       But I don't remember a particular</p> <p>15       conversation where they asked me to -- where they</p> <p>16       linked my being an expert to the finished product of</p> <p>17       the report. By the time I drafted the report, they</p> <p>18       knew that they had wanted me to be an expert in this</p> <p>19       case.</p> <p>20       Q   All right. At -- at some point after you</p> <p>21       had reviewed the literature and you sat and you</p> <p>22       talked with plaintiffs' counsel, you became an</p> <p>23       expert witness for the Plaintiffs; is that right?</p> <p>24      A   Yes.</p> <p>25      Q   Are you able to time that for us any</p>	<p>1       list of references; is that right?</p> <p>2       A   Yes, it does.</p> <p>3       Q   What is meant to be included in the</p> <p>4       references that appear and are attached to your</p> <p>5       report, pages 42 through 47?</p> <p>6       A   Those are references that I have cited</p> <p>7       specifically in my report.</p> <p>8       Q   In addition along with your report, you</p> <p>9       provided a curriculum vitae; is that right?</p> <p>10      A   Yes.</p> <p>11      Q   We'll mark that as Exhibit 14.</p> <p>12       (Exhibit 14 was marked for identification</p> <p>13       and is attached to the transcript.)</p> <p>14      MS. O'DELL: Thank you.</p> <p>15      Q   (BY MR. ZELLERS) The curriculum vitae that</p> <p>16       is attached as -- strike that -- that you provided</p> <p>17       with your report and that we have marked as</p> <p>18       Exhibit 14, is that complete and up to date?</p> <p>19      A   Yes, it is.</p> <p>20      Q   Any additions or corrections that need to</p> <p>21       be made to that?</p> <p>22      A   There are some details of recent</p> <p>23       publications that are not provided in this, but</p> <p>24       those are relatively minor changes.</p> <p>25      Q   Are any of -- the details to publications</p>

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<p>1 that you would update your curriculum vitae to, do 2 any of those relate to this matter or to the 3 opinions you're giving here today? 4 A They do not. 5 Q Deposition Exhibit 15 is also a document 6 that was provided along with your report. It 7 appears to be a reliance list; is that right? 8 MS. O'DELL: Object to the form. Thank 9 you. 10 (Exhibit 15 was marked for identification 11 and is attached to the transcript.) 12 A Yes, it is. 13 Q (BY MR. ZELLERS) What is included on the 14 reliance list which we have marked as a Exhibit 14? 15 A This is a broad list of -- 16 THE COURT REPORTER: 15. 17 Q (BY MR. ZELLERS) Oh, I'm sorry. Yes let 18 me ask that question again. 19 What documents are listed and included on 20 the reliance list which we have marked as 21 Exhibit 15? 22 A That is a broader list of documents. It 23 includes documents that I may have read, but I 24 didn't believe needed to be cited. 25 It also includes documents that counsel</p>	<p>1 the report in that manner, but just to clarify. 2 A No, I could not easily go through and pick 3 out which ones were ones that I provided to them or 4 which ones they provided to me. 5 Q (BY MR. ZELLERS) All right. Are you aware 6 -- do you know who Dr. Judith Wolf is? 7 A No, I do not. I know the name, but not 8 the person. 9 Q Are you aware that your reliance list or 10 additional Materials Considered List, what we have 11 marked as Exhibit 15, is identical to the Materials 12 Considered List that was attached to Dr. Wolf's 13 report? 14 A I -- I don't know who Dr. Wolf is, nor do 15 I know her reliance list. 16 Q All right. Exhibit 15 is a reliance list 17 or Materials Considered List that was prepared by 18 counsel for Plaintiffs; is that right? 19 A It was the list provided to me. 20 Q You may have reviewed some of these 21 documents -- or you have reviewed some of these 22 documents, but potentially not all of these 23 documents -- 24 MS. O'DELL: Object to the form. 25 Q (BY MR. ZELLERS) -- fair?</p>
<p style="text-align: center;">Page 55</p> <p>1 provided to me that -- that may or may not have been 2 closely read. 3 So it includes both articles I know very 4 many, as well as additional documents I may not have 5 as deep of a knowledge of. 6 Q Was -- Deposition Exhibit 15, was that 7 prepared by you or was that prepared by counsel? 8 A That was prepared by counsel. 9 Q Have you reviewed all of the references 10 and materials that are listed out on Deposition 11 Exhibit 15? 12 A I -- I do not know. I would have to go 13 through them one at a time to know if I had reviewed 14 all of them. 15 Q Can you easily tell us which of the 16 materials listed on Exhibit 15, your reliance list, 17 were provided by you and which were provided by 18 counsel? 19 MS. O'DELL: Objection. Objection to 20 form. I think the documents and materials 21 considered -- materials and data considered list. 22 MR. ZELLERS: Well, there's no caption at 23 the top. I have tried to be as descriptive as I can 24 with the witness on it. 25 MS. O'DELL: I think it's referred to in</p>	<p style="text-align: center;">Page 57</p> <p>1 A Yes. 2 Q Looking at your report, Deposition 3 Exhibit 2 -- and let me withdraw that. 4 Have we covered now all of the documents 5 that you have either reviewed and relied upon in 6 preparing your opinions in this matter and your 7 report, which we marked as Exhibit 2, or that were 8 made available to you and you may or may not have 9 looked at them? 10 MS. O'DELL: Object to the form. 11 A Yes. 12 Q (BY MR. ZELLERS) Is your report, 13 Exhibit 2, accurate? 14 A Yes, it is. 15 Q Is your report, Exhibit 2, complete, other 16 than perhaps citing to some of the documents that 17 you reviewed after preparing your report that we 18 identified earlier today? 19 A Yes, it is. 20 Q There were -- withdraw that. 21 You have a fee schedule. You're charging 22 a thousand dollars an hour to review materials and 23 talk with the lawyers in this matter and provide 24 opinions; is that right? 25 A Yes.</p>

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<p>1       Q I kind of got sidetracked in terms of 2 asking you about the Plaintiff lawyers that you met 3 with. 4       We had gotten up to your meeting with 5 Ms. Thompson, with Mr. Restaino, with a lawyer 6 perhaps with the first name of Breanne; is that 7 correct? 8       A Yep. 9       Q Have you remembered the fourth lawyer yet? 10      A I -- I have not. Can -- can I call a 11 friend? 12      Q No. No, need to call a friend. 13      What other Plaintiff lawyers have you met 14 with relating to your work as a plaintiff expert for 15 the MDL litigation? 16      A There are no others that I recall. 17      Q We have other lawyers here today. You met 18 them -- 19      A I apologize. 20      Q -- at least in the last day or two? 21      A Yes. 22      Q Well, don't apologize to me. You probably 23 hurt their feelings. 24      Did you meet all of the lawyers who are 25 here today at some point?</p>	<p>1       most of the day yesterday, did you have any other 2 meetings or conversations with the lawyers for the 3 Plaintiffs to prepare for your deposition? 4       A Yes, I did. So today is Thursday. 5       Wednesday, we met for most of the day. And I met 6 with Dr. Thompson for an hour or so on Wednesday as 7 well. 8       Q All right. Any other -- 9       MS. O'DELL: I think the days may be mixed 10 up. You said "Wednesday" twice. 11      A I apologize. So Tuesday, we met at the 12 end of the day for an hour and then most of the day 13 yesterday, Wednesday, and then today. Thank you. 14      Q (BY MR. ZELLERS) Any other meetings or 15 communications with counsel for Plaintiffs to 16 prepare for the deposition here today? 17      A Any other in-person meetings or -- 18      Q Or phone calls in which there was, you 19 know, discussion about preparing for the deposition. 20      A I believe over -- well, I had asked to 21 reschedule this deposition. So there were a couple 22 of e-mails related to that. 23      I also had asked for a couple of 24 additional documents to help ensure that I was 25 seeing all materials that I felt were relevant to</p>
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<p>1       A Yes, I did. 2       Q Some of them you have met just in the last 3 couple of days as you prepared for the deposition; 4 is that right? 5       A That's correct. 6       Q Other than the lawyers who are present in 7 the room today for Plaintiffs, have you met with any 8 other lawyers or communicated with any other lawyers 9 that you believe represent the Plaintiffs in this 10 litigation? 11      A I have not. 12      Q What did you do to prepare for your 13 deposition here today? 14      A My primary preparation was to review my 15 report and to reaccess references that I included in 16 my report to make sure that I was aware of the 17 details or -- or relevant... 18      Q What else did you do to prepare for your 19 deposition here today? 20      A I also met with the lawyers yesterday to 21 review the process of the deposition and so forth. 22      Q How long did you meet with the lawyers 23 yesterday? 24      A We met most of the day yesterday. 25      Q Other than meeting with the lawyers for</p>	<p>1       the case. 2       Q Are those the materials that were on 3 Exhibit 3 that we talked about at the very 4 beginning? 5       A Yes, they are. 6       Q Anything else that you did with the 7 lawyers in terms of preparing for your deposition 8 here today? 9       A No. 10      MS. O'DELL: Dr. Smith-Bindman, feel free 11 to testify regarding meetings, when they happened, 12 phone calls, et cetera, but not the substance of 13 those discussions. 14      A Okay. 15      MS. O'DELL: Thank you. 16      Q (BY MR. ZELLERS) Any others? 17      A None that I can remember. 18      Q Ms. Thompson -- did you know Ms. Thompson 19 before she initially called you and then came and 20 sat down to meet with you? 21      A Initially, you -- 22      Q Yes. 23      A -- mean? No, I did not. 24      Q Had you ever worked with Ms. Thompson on 25 any other litigation?</p>

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<p>1 A No. 2 Q Other than the talcum powder litigation 3 that we're here deposing you in, have you worked on 4 other litigations for either defendants or 5 plaintiffs? 6 MS. O'DELL: Other than the ones she has 7 testified to? 8 Q (BY MR. ZELLERS) Well, other than, yes, 9 the cases. 10 A No, I have not. 11 Q You have served as an expert witness in 12 other matters in which you did not provide 13 deposition testimony; is that right? 14 MS. O'DELL: Object to the form. 15 A There are a small number of additional 16 medical malpractice cases that I was also involved 17 with which would have settled before I was asked to 18 take a deposition. 19 Q (BY MR. ZELLERS) My question is: Have you 20 ever testified or consulted with either plaintiffs 21 or defense in -- in a product liability litigation 22 like this? 23 A I have not. 24 Q Have you ever provided testimony in a 25 matter relating to a consumer product?</p>	<p>1 Q Do the invoices go through the time that 2 you prepared your opinions and report as of 3 November 15 of 2018? 4 A Yes, they will. 5 Q All right. Is that where they end? 6 A They would also include some hours that I 7 have worked reviewing the material since that time. 8 Although, I don't believe I have submitted those 9 reports -- those invoices, but I certainly can. 10 Q So my question is: How much time have you 11 spent on this matter since your last invoice? Can 12 you estimate that for us? 13 A I would guess in the ballpark of 10 hours, 14 not including the time I met with the lawyers 15 yesterday -- not this week. Excluding the time this 16 week. 17 Q How much time did you spend this week in 18 addition to that 10 hours with the lawyers in 19 preparing yourself to provide deposition testimony? 20 A In the ballpark of another 10 hours. 21 Q Have you been served or been asked to 22 serve as an expert witness or consultant in any 23 other talcum powder litigation or matters? 24 A I have not. 25 Q What percent of your professional time do</p>
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<p>1 A I have not. 2 Q Have you ever been retained as an expert 3 or provided testimony in a matter relating to 4 asbestos? 5 A I have not. 6 Q Mr. Restaino -- had you ever met 7 Mr. Restaino before that initial phone call and 8 meeting back in mid-2017? 9 A I had not. 10 Q When I look at your invoices, will they 11 generally outline the times that you had meetings 12 and communications with Plaintiff lawyers? 13 A Yes, they will. 14 Q Will they also outline whatever work 15 that -- and I don't mean work, but at least dates as 16 to when you began your systematic review or 17 meta-analysis? 18 A The work that I did will be itemized. I'm 19 not sure if I break down writing the report versus 20 doing the systematic review into separate buckets, 21 but it might. 22 Q The invoices will start with sometime in 23 mid-2017, when you started meeting with the lawyers; 24 is that right? 25 A Yes.</p>	<p>1 you spend working as a consultant? 2 A A small amount. Probably less than 3 5 percent. 4 Q What percent of your income is from 5 consulting on litigation matters? 6 MS. O'DELL: For a particular year or time 7 period or average, just -- 8 Q (BY MR. ZELLERS) Well, the last couple of 9 years. 10 A In the last couple of years, a -- a small 11 amount. Probably 5 or 10 percent. 12 Q What is the largest percent of your income 13 that has related to consulting on litigation 14 matters? 15 And what I'm asking you to do is to look 16 back. And what was the high point in terms of 17 income that you received from consulting on 18 medical/legal matters? 19 A Probably the 10 percent that I cited. 20 Q Have you ever attended a convention or a 21 meeting with plaintiff lawyers and other plaintiff 22 experts? 23 A I have not. 24 Q Never? 25 A A meeting of lawyers?</p>

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<p>1 Q Yes, a meeting of lawyers -- 2 A Never. 3 Q -- and plaintiff experts. 4 A Never. 5 Q All right. Have you -- 6 A I didn't know there was such a thing. 7 Q Do you know any of the experts that have 8 also been retained by the Plaintiffs in this 9 litigation? 10 A I don't know them personally, but I -- I 11 have seen their names. And their names are the 12 same -- some of the names are names that are 13 familiar to me. 14 Q Have you communicated with any of the 15 other experts for Plaintiffs? 16 A I have not. 17 Q Have you reviewed reports from any of the 18 experts for Plaintiffs? 19 A I have reviewed a handful of them -- 20 Q What -- 21 A -- yes. 22 Q -- reports of other plaintiff experts have 23 you reviewed? 24 A I reviewed Dr. Cooke's report. I reviewed 25 Mr. Longo's report. I reviewed an ob --</p>	<p>1 Q What others? 2 A Mr. Cooke's deposition, I believe. 3 Q What others? Did you put in your report, 4 the names of other experts that you reviewed their 5 deposition testimony of? 6 A I -- I -- I'm checking if -- if I have. 7 I... 8 Q Well, you have a recollection of reviewing 9 -- 10 A -- I -- I don't have a recollection of any 11 others that I have looked at. 12 Q Do you know who David Kessler is? 13 A I do. 14 Q How do you know Dr. Kessler? 15 A I -- 16 MS. O'DELL: Object to the form. 17 A -- Dr. Kessler is a faculty member at UCSF. 18 Q (BY MR. ZELLERS) Do you know him personally? 19 A Not well, but enough to say hello. 20 Q Been at meetings with him? 21 A I have. 22 Q You understand that he's an expert for the Plaintiffs?</p>
<p>1 obstetrician gynecologist report. 2 Q Do you remember who? 3 A Clarke perhaps or something like Clarke. 4 MS. O'DELL: If you need to refer to your 5 report or your materials, feel free to do that. 6 A Okay. I think Mr. Cralley's (phonetic) report. 7 Q (BY MR. ZELLERS) Do you know any of those 8 experts personally? 9 A I do not. 10 Q All right. You have never communicated 11 with any of those experts; is that right? 12 A I have not. 13 Q You have just reviewed their reports; is 14 that right? 15 A That's correct. 16 Q Have you reviewed any deposition testimony 17 or portions of depositions of plaintiff experts in 18 this matter? 19 A I have reviewed small pieces of several of them. 20 Q Okay. What experts have you reviewed a -- 21 small pieces of their deposition? 22 A Dr. Moorman's testimony or deposition, I 23 saw some of.</p>	<p>1 A -- I have been told that. 2 Q Have you had any discussions with 3 Dr. Kessler at all relating to this matter, the 4 talcum powder matter? 5 A I have not. 6 Q Have you participated in any projects -- 7 medical/legal projects with Dr. Kessler -- 8 A I -- 9 Q -- in the past? 10 A -- I have not. 11 Q Have you heard of a documentary called 12 "The Bleeding Edge"? 13 A I have. 14 Q Did you participate in the documentary 15 called "The Bleeding Edge"? 16 A I did. 17 Q You understand that Dr. Kessler also 18 participated in that; is that right? 19 A I -- yes. 20 Q That is a documentary related to what? 21 A A medical devices, primarily. 22 Q Have you served as a consultant or expert in medical device matters? 23 A I have not. 24 Q Pharmaceutical matters?</p>

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<p>1 A I have not. 2 Q How was it then that you were retained or 3 ended up participating in "The Bleeding Edge" 4 documentary? 5 MS. O'DELL: Object to the form. 6 A I -- I'm not sure if you have had a chance 7 to see the documentary or not, but my role in it 8 is -- is pretty off topic. 9 And so at an initial incarnation of that 10 documentary, they had thought about focusing on an 11 issue where I do do research, radiation for medical 12 imaging. 13 It no longer fits into their new topic, 14 but somehow they kept a quote of me in that film. 15 Q Did -- Dr. Kessler, was he the one 16 responsible for putting that documentary together? 17 A I -- no, I don't -- I don't believe he 18 was. 19 Q Were you paid for your work in 20 participating in that documentary? 21 A No I was not. 22 Q All right. Jane Hall, she assisted you 23 with your systematic review. Is -- is that the 24 right way you would characterize it, a systematic 25 review?</p>	<p>1 A I had -- 2 Q -- in this case -- 3 A -- not. 4 Q -- is that right? 5 A That's correct. 6 Q Have you worked with other 7 biostatisticians in the past? 8 A I have. 9 Q Why did you decide you needed to work with 10 a new biostatistician for this litigation? 11 A The primary work that I needed was to do a 12 few graphs and figures, and so I wanted someone who 13 was both an expert in that and who I thought could 14 respond relatively quickly. 15 I have on my team, several 16 biostatisticians who are part of my research group, 17 but they don't have particularly relevant expertise 18 in generating these graphs. 19 And it would have required them to acquire 20 some skills, and so I wanted someone who focuses 21 specifically on this who could do that. 22 Q Did you review any work from Dr. Hall 23 before you hired her? 24 A I have been involved in systematic reviews 25 that she contributed to that I was very impressed</p>
<p>1 A Yes, the systematic review -- you asked 2 the difference between a meta-analysis. It sort of 3 implies a certain scientific review -- rigor when 4 you call it a systematic review, so that's how I 5 like to think about it. 6 Q You think systematic review implies more 7 scientific rigor than meta-analysis? 8 A I think it's a subtle distinction, but 9 yes, I do. 10 Q Well, you communicated and hired Jane Hall 11 to assist you; is that right? 12 A Yes, I did. 13 Q Have you produced all of your 14 communications and materials with Jane Hall? 15 A I have. 16 Q How did you come in contact with Dr. Hall? 17 A I work closely with an emergency medicine 18 researcher, and I have assisted him in several 19 systematic reviews. 20 And I knew he had a biostatistician who 21 generated the kind of graphics and analysis that I 22 wanted. And so I reached out to him, and he 23 introduced me to Dr. Hall. 24 Q You had never worked with Dr. Hall prior 25 to performing your systematic review --</p>	<p>1 with. And so -- 2 Q So what other -- 3 A -- I reached out. 4 Q -- sorry. I didn't mean to interrupt you. 5 What other systematic reviews have you 6 been involved with Dr. Hall? 7 A Actually, two of them. One of them is on 8 a treatment for kidney stones. Ralph Wang is the 9 senior author. 10 And the second was a systematic review 11 around the diagnosis of and treatment for pulmonary 12 embolism that also Dr. Wang was the leader on. 13 Q Did you ever meet with Dr. Hall with 14 respect to this work in person? 15 A I never met with her related to anything. 16 It was all by electronic communication. 17 Q Did you ever talk with her over the phone? 18 A Yes. We spoke a few times. 19 Q Did you take notes of your conversations 20 with Dr. Hall? 21 A Not that I recall. 22 Q You did have e-mails with Dr. Hall -- 23 A Yes. 24 Q -- is that right? 25 A Yes.</p>

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<p>1 Q Do you have receipts for the work that 2 Dr. Hall performed for you? 3 MS. O'DELL: Object to the form. 4 A Like an invoice receipt? 5 Q (BY MR. ZELLERS) Yes, an invoice receipt. 6 A No, I do not. 7 Q You ended up paying her rush fees so that 8 she would do the work and the analysis more quickly; 9 is that right? 10 MS. O'DELL: Object to the form. 11 A I -- I remember telling her I didn't mind 12 her rush fee. But -- but all of the invoicing was 13 done directly with counsel. 14 Q (BY MR. ZELLERS) Well, Dr. Hall came to 15 you and said: You know, it's going to take X amount 16 of time to do a thorough analysis? 17 A Yes. 18 Q She did offer to rush the analysis -- 19 A Yes. 20 Q -- when you told her you needed it? 21 A Yes. 22 Q And your recollection is she, you know, 23 did rush the analysis and -- and got it done within 24 a couple of days? 25 MS. O'DELL: Object to the form.</p>	<p>1 time is 11:10 a.m. 2 Q (BY MR. ZELLERS) Dr. Smith-Bindman, I'm 3 handing you Deposition Exhibit 16, which is an 4 e-mail chain. The very first e-mail, meaning the 5 last e-mail at the top of page 1, is Jane Hall -- 6 from Jane Hall, September 24, 2018, at 8:04 a.m. to 7 you. 8 (Exhibit 16 was marked for identification 9 and is attached to the transcript.) 10 Q (BY MR. ZELLERS) Will you take a look at 11 that and tell us if that is a printout of some of 12 your e-mail exchanges with Dr. Hall? 13 A Yes. 14 Q If we go to the very first e-mail in the 15 chain, it appears that you contacted Dr. Hall on 16 Wednesday, September 19, 2018, in the afternoon, 17 3:21 p.m., and told her that you were interested 18 primarily in generating a forest plot with a summary 19 estimate and test for heterogeneity; is that right? 20 A Yes. 21 Q That was your initial contact with 22 Dr. Hall; is that right? 23 A Yes. 24 Q You contacted your referring person, 25 Ralph, on the e-mail; is that right?</p>
<p>1 A I believe the analysis actually took a 2 couple of weeks. 3 But I was very open to paying her rush 4 fee. I thought her fee was extraordinarily 5 reasonable, and so it just made it easier for me to 6 get it done quickly rather than to delay. 7 Q (BY MR. ZELLERS) You defer to the e-mails 8 and the documents as to the timing of when you 9 requested that she rush the analysis and when she 10 provided it to you; is that right? 11 MS. O'DELL: Object to the form. 12 A I believe my documents would be correct 13 about when I asked for stuff and when it was done, 14 yes. 15 MS. O'DELL: Excuse me, Mike. We have 16 been going about an hour and 20 minutes. Is this a 17 good time to take a quick break? 18 MR. ZELLERS: Absolutely. 19 THE VIDEOGRAPHER: We are off the record. 20 The time is 10:40 a.m. This is the end of Disc 1. 21 (A break was taken from 10:40 a.m. to 22 11:10 a.m.) 23 THE VIDEOGRAPHER: We are back on the 24 record. This marks the beginning of Disc No. 2 in 25 the deposition of Dr. Rebecca Smith-Bindman. The</p>	<p>1 A Yes. 2 Q All right. You told -- the next day you 3 had some exchanges of e-mails with Dr. Hall. You 4 told Dr. Hall that because you were doing a review 5 for a legal case, you did not need the detail that 6 you would need for a paper; is that right? 7 MS. O'DELL: Object to the form. 8 A Can you tell me where you're reading? 9 Q (BY MR. ZELLERS) Sure. I'm reading on 10 page 2 of Exhibit 16, the very last e-mail. This is 11 from you on September 20 of 2018. 12 You thanked Dr. Hall for her willingness 13 to help. 14 "As Ralph mentioned, I am doing a review 15 for a legal case and don't need quite the detail I 16 would usually need for a paper." 17 Is that what you told Dr. Hall? 18 A Yes, it is. 19 Q As of -- well, you communicated with 20 Dr. Hall on Friday, September 21st, in the 21 morning. This is the very last e-mail on page 1 of 22 Exhibit 16. 23 You asked her to send you whatever she was 24 doing sooner rather than later because you needed to 25 get your report finished ASAP; is that right?</p>

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<p>1           MS. O'DELL: Object to the form. I think 2       you misstated date on the e-mail but -- 3       Q (BY MR. ZELLERS) Well, I'm sorry. Let me 4       ask that question again. On Friday morning, 5       September 21, 2018, you told Dr. Hall that you 6       needed her information as soon as possible because 7       you had to finish your report ASAP; is that right? 8       A Yes. 9       Q Dr. Hall got back to you that day and 10      said, you know, I'll do my best. But if you want, I 11      can rush the work, if you're willing to pay time and 12      a half. 13      You then got back to her on Monday 14      morning, September 24, and said: Yes, I'll pay the 15      rush fee, and I would like your work as soon as 16      possible. 17      Is that right? 18      MS. O'DELL: Object to the form. Object 19      to the form. 20      A I -- I think you're paraphrasing what it 21      says. The -- the idea was she said that if I paid 22      the rush, she could have some money to defray 23      childcare cost during -- 24      Q (BY MR. ZELLERS) Right. And -- 25      A -- that time, and I agreed to do that.</p>	<p>1           A Yes. 2       Q Have you communicated about this 3       litigation with anyone other than the plaintiffs' 4       counsel that you have told us about with Dr. Hall? 5       Anyone else? 6       MS. O'DELL: Object to the form. 7       A I -- you asked me if I have mentioned this 8       litigation to anyone else? 9       Q (BY MR. ZELLERS) Well, let's start there. 10      Have you mentioned this litigation to anyone else? 11      A I have. 12      Q Who have you mentioned this litigation to? 13      A I have certainly mentioned it to my 14      husband. 15      Q Other than your husband? 16      A And then I have mentioned it to several 17      close friends. 18      Q Your husband is a physician; is that 19      right? 20      A He is. 21      Q Did he provide any professional input to 22      you related to your review of this matter? 23      A No, he did not. 24      Q The close friends that you mentioned this 25      to, did they provide any input or assistance or</p>
<p>1       Q Exactly. And she said back to you: Okay. 2       By the end of -- so this is on a Monday. She said 3       you'll have the work product from her Wednesday at 4       the earliest, probably Thursday. 5       "I should have at least two sets of plots 6       today, and I'll send them to you as they are 7       output." 8       Is that right? 9       A Yes. 10      Q You have produced all of your e-mails and 11      communications with Dr. Hall in this matter; is that 12      right? 13      A I have. You're not showing me all of 14      those communications; is that right? 15      Q I haven't yet. 16      A Okay. 17      Q I'm going to show you some more. 18      A Yes. 19      Q But my question to you is: Included in 20      the production, at least you have included all of 21      your communications -- 22      A Yes. 23      Q -- with Dr. Hall -- 24      A Yes. 25      Q -- is that right?</p>	<p>1       direction to you relating to this matter? 2       A No. 3       Q I asked you before if you read any of the 4       depositions of the plaintiff experts. Have you 5       discussed generally with plaintiffs' counsel, the 6       deposition testimony that's been given by other 7       plaintiff experts in this litigation? 8       MS. O'DELL: I would instruct you not to 9       answer that question. 10      MR. ZELLERS: I disagree, but we'll 11      reserve that issue. 12      Q (BY MR. ZELLERS) Was there anything that 13      you asked plaintiffs' counsel to provide to you in 14      connection with your review or for preparation of 15      your report that you were not provided with? 16      A So most of the documents that I included 17      in my report, I found by doing an independent search 18      online. 19      There were several items that I didn't 20      find that I wanted to review as well. And so some 21      of the items that I asked counsel for were items 22      that I couldn't find through scientific research 23      that I asked them to provide. 24      Q And you have told us about those 25      documents, and those are listed out on Exhibit 3; is</p>

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<p>1       that right?</p> <p>2       A   That's correct.</p> <p>3       Q   My question was a little bit different.</p> <p>4           Is there anything that you asked for from</p> <p>5       plaintiffs' counsel that they were not able or did</p> <p>6       not provide to you?</p> <p>7       MS. O'DELL: Object to the form.</p> <p>8       A   I -- I can't think of anything that fits</p> <p>9       into that question.</p> <p>10      Q   (BY MR. ZELLERS) Take a look at your</p> <p>11       reliance list, which we have marked as Deposition</p> <p>12       Exhibit 15.</p> <p>13       Do you have that in front of you?</p> <p>14      A   I have my copy of the reliance list. I</p> <p>15       don't have your Exhibit 15 in front of me.</p> <p>16      Q   If you have your copy -- does it start</p> <p>17       with page 1?</p> <p>18      A   Yes, it does.</p> <p>19      Q   At the very top --</p> <p>20      A   Yes.</p> <p>21      Q   -- the first item is "A Survey of The</p> <p>22       Long-Term Effects"?</p> <p>23      A   Yes.</p> <p>24      Q   If you turn to pages 11 and 12, there's a</p> <p>25       series of documents that begin with "IMERYS"</p>	<p>1       MR. ZELLERS: Sure. Exhibit 3 is the list</p> <p>2       you gave me today of -- of the documents that</p> <p>3       Dr. Smith-Bindman reviewed in addition to whatever</p> <p>4       else is marked.</p> <p>5       MS. O'DELL: -- I see. I see.</p> <p>6       MR. ZELLERS: So there's a -- it's a list</p> <p>7       of Bates-stamped documents.</p> <p>8       MS. O'DELL: Yes.</p> <p>9       MR. ZELLERS: There's 10 or 12 Imerys</p> <p>10       documents. There's one J&amp;J Bates-stamped document</p> <p>11       --</p> <p>12       MS. O'DELL: Right.</p> <p>13       MR. ZELLERS: -- and then there's the, I</p> <p>14       think, expert report or --</p> <p>15       MS. O'DELL: Right.</p> <p>16       MR. ZELLERS: -- deposition of Dr. Cooke</p> <p>17       listed?</p> <p>18       MS. O'DELL: Right. Okay. I just object</p> <p>19       to the form of the question. And -- and --</p> <p>20      A   Could I --</p> <p>21      MS. O'DELL: -- then --</p> <p>22      A   -- see Exhibit 3?</p> <p>23      MS. O'DELL: -- yes. And then I would --</p> <p>24       Counsel, permit me -- there was a question related</p> <p>25       to Exhibit 3. I thought you were referring to the</p>
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<p>1       followed by numbers.</p> <p>2       Do you see that?</p> <p>3      A   I do.</p> <p>4       Q   Do you know whether or not you reviewed</p> <p>5       some or all of those Imerys-produced documents as</p> <p>6       part of your review in this matter?</p> <p>7       A   If those reflect Imerys testing documents</p> <p>8       then yes, I did review at least some of them. I</p> <p>9       can't be sure all of them.</p> <p>10      Q   Do you know whether or not these documents</p> <p>11       relate to Imerys testing?</p> <p>12      A   I have reviewed at least a half dozen</p> <p>13       Imerys testing documents.</p> <p>14      Q   In --</p> <p>15      A   I believe that's what these are, but I --</p> <p>16       I'm not sure.</p> <p>17      Q   There are a number of Imerys documents</p> <p>18       that are listed on Exhibit 3, which you identified</p> <p>19       as testing documents; is that right?</p> <p>20      A   Yes.</p> <p>21      Q   Do you know if you reviewed any Imerys</p> <p>22       documents other than the documents that are listed</p> <p>23       out on Exhibit 3?</p> <p>24      MS. O'DELL: Can you just make a --</p> <p>25       Exhibit 3, would you remind --</p>	<p>1       materials list, and so I'm going to assert my</p> <p>2       objection a little bit late.</p> <p>3       MR. ZELLERS: Okay. I just want to move</p> <p>4       forward.</p> <p>5       MS. O'DELL: I know that you do.</p> <p>6       MR. ZELLERS: Yes.</p> <p>7       MS. O'DELL: I just want to be clear.</p> <p>8       Because Exhibit 3 that we provided were additional</p> <p>9       materials that Dr. Smith-Bindman asked for and</p> <p>10       reviewed in addition to the Materials Considered. I</p> <p>11       don't want the record to be unclear. So --</p> <p>12      MR. ZELLERS: Well --</p> <p>13      MS. O'DELL: -- I have noted my objection.</p> <p>14      MR. ZELLERS: -- and the record is clear</p> <p>15       that Dr. Smith-Bindman did not review all of the</p> <p>16       materials listed in the Materials Considered List,</p> <p>17       Exhibit 15. But that testimony will stand as it is.</p> <p>18       My question just is: In addition to the</p> <p>19       documents that I was told about this morning that</p> <p>20       you believe are testing documents, do you know</p> <p>21       whether you reviewed any other Imerys-produced</p> <p>22       documents, and specifically the ones that are</p> <p>23       itemized on pages 11 and 12 of your Materials</p> <p>24       Considered List?</p> <p>25      A   I would need to see those documents to</p>

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<p>1 know if I reviewed them. The names are awfully 2 nonspecific.</p> <p>3 Q With respect to the Imerys documents -- or 4 Imerys-produced documents that are identified in 5 Exhibit 15, which is your Materials Considered List, 6 do you know how those were compiled?</p> <p>7 MS. O'DELL: Object to the form.</p> <p>8 A You're asking me where this list came 9 from?</p> <p>10 Q (BY MR. ZELLERS) I think you have told us 11 the list came from plaintiffs' counsel; is that 12 right?</p> <p>13 A Yes.</p> <p>14 Q My question then, I guess, is more 15 precise. Do you know how plaintiffs' counsel 16 compiled this list of Imerys-produced documents or 17 how they selected those documents?</p> <p>18 A I know I had a lot of back and forth in 19 generating this list with actually Breanne at the 20 time. I sent her a lot of documents that I had 21 looked at that I hadn't cited that she added to the 22 list.</p> <p>23 These were ones that she added to the 24 list, and I don't remember what they were.</p> <p>25 Q I'm going to ask my question again. Do</p>	<p>1 litigation -- so when you do your research work or 2 when you do your publishing work -- do you rely on 3 documents that are picked by someone else that may 4 not represent the full body of evidence?</p> <p>5 MS. O'DELL: Object to the form.</p> <p>6 A In my work, I review whatever data are 7 available. And sometimes those data are identified 8 by me and sometimes they have been given to me by 9 other sources to review.</p> <p>10 Q (BY MR. ZELLERS) Is that a -- a yes or a 11 no? And let me withdraw that.</p> <p>12 The documents that we have looked at in 13 your reliance list Materials Considered List that 14 begin with Imerys and begin with J&amp;J, your 15 understanding, those are documents that have been 16 produced by the Defendants in this litigation; is 17 that right?</p> <p>18 A Yes.</p> <p>19 Q Do you know what percentage of the overall 20 documents that have been produced by Johnson &amp; 21 Johnson companies and by Imerys, these documents 22 that are listed in Exhibit 15, represent?</p> <p>23 MS. O'DELL: Object to the form.</p> <p>24 A Are you asking me if the handful of 25 documents from Johnson &amp; Johnson that are in this</p>
<p>1 you know how -- these documents, the documents that 2 are on pages 11 and 12 of your Materials Considered 3 List that begin with the "Imerys" name, do you know 4 how they were compiled?</p> <p>5 A No.</p> <p>6 Q All right. The same question. If you 7 look on page 13 of your Materials Considered List, 8 there's a series of documents that have J&amp;J and then 9 a number; is that right?</p> <p>10 A Yes.</p> <p>11 Q You, as we sit here, do not know what 12 those documents relate to; is that right?</p> <p>13 A That's correct.</p> <p>14 MS. O'DELL: Object to the form.</p> <p>15 Q (BY MR. ZELLERS) You do not know how this 16 listing of J&amp;J documents was compiled; is that 17 right?</p> <p>18 A That's correct.</p> <p>19 Q These are documents produced by Imerys and 20 by Johnson &amp; Johnson companies as part of this 21 overall list of materials that were available, you 22 know, for you to review; is that right?</p> <p>23 MS. O'DELL: Object to the form.</p> <p>24 A Yes.</p> <p>25 Q (BY MR. ZELLERS) Outside of your work in</p>	<p>1 list reflect all of the documents ever created at 2 Johnson &amp; Johnson or all relevant documents or --</p> <p>3 Q (BY MR. ZELLERS) Do you have any idea?</p> <p>4 A No, no idea.</p> <p>5 Q This is a handful of documents that have 6 been listed out by plaintiffs' counsel for you; is 7 that right?</p> <p>8 A Yes.</p> <p>9 MS. O'DELL: Object to the form.</p> <p>10 A Yes.</p> <p>11 Q (BY MR. ZELLERS) All right. In your 12 report you cite two exhibits from the depositions of 13 several witnesses. There's an exhibit from a 14 deposition of John Hopkins.</p> <p>15 Do you know who John Hopkins is?</p> <p>16 A I know what the document is, but I -- I 17 don't know what -- who John Hopkins is.</p> <p>18 Q Do you know what company he works for?</p> <p>19 A I do not.</p> <p>20 Q Do you know what his position or title is?</p> <p>21 MS. O'DELL: Object to the form.</p> <p>22 Q (BY MR. ZELLERS) You're looking in your 23 materials at the exhibit that you were provided from 24 his deposition; is that right?</p> <p>25 A Yes. I -- I do not --</p>

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<p>1 Q Have -- 2 A -- see. 3 Q -- you read any portion of the deposition 4 of John Hopkins? 5 A I have not. 6 Q Have you reviewed any other exhibits from 7 the deposition of John Hopkins? 8 A I have not. 9 Q Do you know who Julie Pier is? 10 A I believe I do. 11 Q Who is Julie Pier? 12 A I -- I'm just checking. I -- I -- I got a 13 few names wrong earlier, so I want to just check 14 if -- 15 Q Well, you're going back now and you are 16 looking at your report? 17 A Yes. 18 Q And you have annotated your report, I 19 guess, that you are using here today; is that right? 20 A Yes. 21 Q Why don't we -- just so we have a complete 22 record, we'll mark your annotated report as 23 Exhibit 17. 24 A Yes. 25 (Exhibit 17 was marked for identification)</p>	<p>1 Q All right. You were provided -- just as 2 you were for the exhibit from the deposition of John 3 Hopkins, you were provided with the exhibit that you 4 are reviewing from Julie Pier's deposition; is that 5 right? 6 MS. O'DELL: Object to the form. 7 A No, I don't -- well, I -- I don't believe 8 that's why I know who she is. 9 I -- I believe The New York Times story 10 and the Reuters story discussed her deposition. So 11 I don't remember reading her deposition. But I -- 12 if I'm not confusing her with someone else, I think 13 that's where I learned about her testing. 14 Q (BY MR. ZELLERS) Okay. You're a couple of 15 questions ahead of me here. No. 1, the exhibit 16 that's in your blue folder from the deposition of 17 Julie Pier, that was provided to you for review by 18 counsel for Plaintiffs; is that right? 19 A Thank you for that reminder. That's the 20 Imerys document. Yes. Yes. 21 Q I'm going to go back to my question. 22 A Yes. 23 Q The exhibit from Julie Pier's deposition, 24 that was provided to you for review by plaintiffs' 25 counsel; is that right?</p>
<p>1 and is attached to the transcript.) 2 A And -- and I would like to clarify based 3 on some of my notes. But -- so I think Dr. Hopkins 4 oversaw testing for -- for talc products at J&amp;J. 5 Q (BY MR. ZELLERS) Is that a note that you 6 have on your report? 7 A It is. 8 Q All right. That's a note that you put on 9 your report in preparation for your deposition 10 today? 11 MS. O'DELL: Object to the form. 12 A It's a note I put on my report when I was 13 reviewing my report and the documents I'm citing and 14 so forth. 15 Q (BY MR. ZELLERS) Who is Julie Pier? Do 16 you know who she is? 17 A I'm -- what I believe -- although, I don't 18 see that I made a note of it -- is that she was 19 someone who did testing from one of the New York 20 hospitals of -- of the talc powder products. 21 Q Do you know anything more than that about 22 Julie Pier or who she worked for or what her role 23 with respect to talcum powder was? 24 A Now that I am remembering where I -- I -- 25 no, I don't really know those things.</p>	<p>1 A Yes. 2 MS. O'DELL: Object to the form. 3 Q (BY MR. ZELLERS) You have not reviewed the 4 deposition transcript of Ms. Pier; is that right? 5 A Not that I recall. 6 Q You have not reviewed any exhibit -- other 7 exhibits to her deposition; is that right? 8 A That is correct. 9 Q Are you aware that the two exhibits that 10 you were provided by counsel for Plaintiffs -- one 11 from the deposition of John Hopkins and one from the 12 deposition of Julie Pier -- that those exhibits were 13 prepared by plaintiffs' experts for this litigation? 14 MS. O'DELL: Object to the form. I think 15 you referred to plaintiffs' experts. I think you 16 misspoke. You said they were prepared by 17 plaintiffs' experts. 18 MR. ZELLERS: Well -- and I will ask it 19 again then. 20 Q (BY MR. ZELLERS) Are you aware that the 21 exhibits that were provided to you -- one from 22 Ms. Pier's deposition and one from the Hopkins 23 deposition -- are exhibits that were prepared by 24 Plaintiffs in this litigation? 25 MS. O'DELL: Object to the form.</p>

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<p>1        A I was provided these documents from a 2 prior case. I don't know who prepared them or where 3 they came from. I -- they were provided to me by 4 counsel.</p> <p>5        Q (BY MR. ZELLERS) Let me ask you just a 6 couple of background questions from your review of 7 the literature in this case. You have reviewed a 8 lot of literature relating to talcum powder and 9 talcum powder use by women in the perineal region; 10 is that right?</p> <p>11      A Yes, I have.</p> <p>12      Q I think you say in your report that you 13 reviewed upwards of 40 studies in papers relating to 14 that. Does that sound about right?</p> <p>15      MS. O'DELL: Object to the form.</p> <p>16      A Upward of 40 studies that provided primary 17 new data. There were probably hundreds of papers I 18 reviewed on the topic.</p> <p>19      Q (BY MR. ZELLERS) From that review, do you 20 agree that most women who use talcum powder in their 21 perineal region begin that use before age 30?</p> <p>22      A I don't know the -- when -- I -- I think a 23 lot of women start use when they're young. I would 24 have to check my report if I have cites as to when 25 they began using talcum powder products.</p>	<p>1        Q And if we looked at the data for when and 2 the age that women were when they first used genital 3 powder, at least from this study by Dr. Cramer, it 4 appears that the vast majority of women began using 5 talcum powder in their genital area before age 30; is 6 that right?</p> <p>7        A In this publication.</p> <p>8        Q Do you recall any other publications 9 that -- that you reviewed that provided contrary 10 information?</p> <p>11      A The question you're asking me is not one 12 that I spent a lot of time thinking about and so 13 can't recall -- sort of across the hundreds of 14 papers I read and 50 that talked about the 15 association -- what time the age of first use was. 16      I -- I see Dr. Cramer's experience is that 17 women do report beginning use earlier, but I -- 18 there's no way for me to know if that's a reflection 19 of his sampling, the place he studied the women, and 20 so forth.</p> <p>21      Q At least on that point, you would refer to 22 Dr. Cramer, fair?</p> <p>23      MS. O'DELL: Object to the form.</p> <p>24      A I -- I would defer to a comprehensive 25 review of the literature to come up with that view.</p>
<p>1        Q (BY MR. ZELLERS) Well, take a look, if you 2 will, at Deposition Exhibit 18, which is a report by 3 Cramer. 4                 (Exhibit 18 was marked for identification 5 and is attached to the transcript.) 6        Q (BY MR. ZELLERS) He's the first named 7 author. This is the 2016 study -- 8        MS. O'DELL: Thank you. 9        Q (BY MR. ZELLERS) -- report. Are you -- 10      MS. O'DELL: Are we at 18? 11      MR. ZELLERS: 18. 12      Q (BY MR. ZELLERS) You're familiar with the 13 paper we have marked as Deposition Exhibit 18; is 14 that right? 15      A Yes, I am. 16      Q I do want to ask you questions a later 17 about that. But for purposes of this question when 18 do most women who use talcum power -- powder in 19 their perineal region begin, go to page 336 of 20 Exhibit 18 and specifically Table 1. 21      A Yes. 22      Q One of the categories that is reported 23 here in Table 1 is "Age First Used Genital Powder"; 24 is that right? 25      A Yes.</p>	<p>1        My -- my guess would be that Dr. Cramer 2 believes his numbers in his population, but I -- but 3 I don't know that that's the truth in other 4 populations. 5        Q (BY MR. ZELLERS) Well, let me ask you 6 another question. On average from the studies that 7 you reviewed, do women who use talcum powder in 8 their perineal region continue that use for over 9 20 years? 10      MS. O'DELL: Object to the form. 11      A My recollection of the literature is that 12 most publications could not assess or did not ask in 13 detailed enough form of how long women used it. 14      I -- I -- again, it's possibly a question 15 that could be answered from the literature, but I 16 don't recall knowing that answer from my review of 17 the literature. 18      Q (BY MR. ZELLERS) Did you review the Wu 19 2015 paper? 20      A I did. 21      Q Do you have that in one of your notebooks? 22      A I will have it in here. 23      Q That makes it easy. 24      A 2009 or -- 25      Q '15. No. The 2015 Wu paper.</p>

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<p>1 A Yes, I do. 2 Q Turn to page 1097, Table 2. 3 A Could you -- unfortunately, the page -- 4 the version I have is a free download, and it 5 doesn't have the same page -- 6 Q How -- 7 A -- numbers. 8 Q -- about -- can you find Table 2? It's 9 the a table that's captioned "Prevalence of Risk 10 Factors in Non-Hispanic white, Hispanic, and 11 African-American Control." 12 A Yes, I have that paper. 13 Q All right. So if you look at the 14 controls, at the very bottom of that section, it 15 gives a mean number of years of talc use among 16 users; is that right? 17 A Yes. 18 Q And whether we're looking at non-Hispanic 19 whites, Hispanics, or African-Americans, at least 20 the number of years of talc use that's reported is 21 greater than 20 years for each of those groups; is 22 that right? 23 A In -- 24 MS. O'DELL: Object to the form. 25 A -- in Dr. Wu's paper, there is reported</p>	<p>1 A Yes. 2 Q (BY MR. ZELLERS) Are you able to tell us 3 how far before you prepared your report, November 15 4 of 2018, that you formed those conclusions? 5 MS. O'DELL: Object to the form. 6 A I spent considerable hours during 2018 7 reviewing the literature. And over the course of 8 that year, my opinions started to solidify when I 9 saw the evidence that strongly supported that 10 ovarian cancer is caused by talcum powder products. 11 I -- 12 Q (BY MR. ZELLERS) And -- 13 A -- I -- I believe that my final systematic 14 review was for me important to -- to confirm that 15 association. And that wasn't done -- that wasn't 16 completed until my report was basically -- close to 17 when my report had to be drafted. 18 Q The systematic review that you did was in 19 and around September and October of 2018; is that 20 right? 21 A I believe the final statistical analysis 22 was then, but my -- my systematic review went on for 23 many months. 24 Q Well, your systematic review, at least 25 insofar as Dr. Hall assisted you, was in September</p>
<p>1 that the mean number of years is greater than 20. 2 Q (BY MR. ZELLERS) If we look down at the 3 group below, the number of cases, the mean number of 4 years of talc use among users is greater than 5 20 years, also for each of those groups; is that 6 right? 7 MS. O'DELL: Object to the form. 8 A Dr. Wu found that the average number of 9 years was greater than 20, yes. 10 Q (BY MR. ZELLERS) All right. You have 11 never published on, you know, any topic relating to 12 talcum powder or any association between talcum 13 powder and ovarian cancer; is that right? 14 A I have not. 15 Q Your opinion is that women exposed to 16 perineal talcum powder products on a regular basis 17 have about a 50 percent increase in their subsequent 18 risk of developing serous invasive cancer; is that 19 correct? 20 A Yes, that is my opinion. 21 Q You also opine in your report that there 22 is a causal association between genital talcum 23 powder use and ovarian cancer generally; is that 24 right? 25 MS. O'DELL: Object to the form.</p>	<p>1 of 2018; is that right? 2 MS. O'DELL: Object to the form. 3 A The systematic review that I described in 4 my report has a lot of components. So one component 5 is to do a complete comprehensive review of -- of 6 what's been published. 7 And that involved doing the search, 8 according -- obtaining all the papers, and then 9 reviewing the bibliography of all of those papers. 10 Then reviewing all those papers critically 11 and then abstracting data for those papers. Kind of 12 towards the tail end of that review is to 13 statistically combine the studies. 14 Dr. Hall was involved both in abstracting 15 the data as a second set of eyes and in doing the 16 statistical summary. But I reached out to her after 17 all of those initial points were completed. So that 18 went on for many months. 19 Q (BY MR. ZELLERS) Is it the objective of a 20 systematic review to bring clarity to a research 21 question by combining like-with-like data? 22 MS. O'DELL: Object to the form. 23 A The purpose of the systematic review is to 24 take individual papers that may not have enough 25 statistical power to provide by themselves,</p>

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<p>1 individual results that are meaningful. And if the 2 methodology is combinable, to pool the sample size 3 to get greater statistical power to come up with a 4 conclusion. 5 But your question about combining like 6 with like is -- is -- is very important. 7 Q (BY MR. ZELLERS) In order for research to 8 be useful, it must be valid, correct? 9 A Yes. 10 Q Inaccurate and incomplete reporting of 11 methods can make research unreasonable and unusable; 12 is that right? 13 MS. O'DELL: Object to the form. 14 A I -- I -- I think there are separate 15 phases of research that need happen. I think the 16 reporting of methodology is so that other people can 17 duplicate your results, understand your results. 18 But in and of themselves, the reporting 19 does not influence the reliability of the -- of the 20 research. 21 Q (BY MR. ZELLERS) Is reporting of 22 methodology important? 23 A I -- I think reporting of methodology so 24 that other people can duplicate the results is 25 important.</p>	<p>1 been done, I tried, in writing my report, to 2 highlight the details of what would be needed to 3 understand my result. 4 But I have not, for example, included 5 certain details that you would typically put in a 6 journal article. 7 So in a journal article, you would always 8 publish the version of SAS or R that was used for 9 the report. I -- I would not have included that. 10 And -- and I believe some of the documents 11 I shared with you that Dr. Hall provided to me on 12 the methodology were included in the e-mail to me. 13 And I may not have included it in the 14 report, thinking that the reader would not -- you, 15 for example, would be interested in some of those 16 biostatistical nuances. 17 But when I publish it, I would put those 18 in because the readership might care about them. 19 Q You talked, I believe, a minute ago about 20 abstracting data; is that right? 21 A Yes. 22 Q Is data abstraction one of the most 23 important steps in conducting a meta-analysis or a 24 systematic review? 25 Would you agree with that?</p>
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<p>1 So if -- if I move ahead as I'm planning 2 to publish my systematic review, then I would 3 include greater details about the methodology so 4 that other investigators could duplicate my work, 5 should -- should they so choose. 6 Q At least as of now, other scientists or 7 epidemiologists would not be able to reproduce what 8 you have done based upon your report -- 9 MS. O'DELL: Object -- 10 Q (BY MR. ZELLERS) -- correct? 11 MS. O'DELL: -- object to the form. 12 A I am -- I am not sure that that's the 13 case. 14 Q (BY MR. ZELLERS) Do you think that all of 15 the steps that you followed in terms of preparing 16 your systematic review are set forth in your report? 17 MS. O'DELL: Object to the form. 18 A I think the path that I followed in this 19 review and the method that I used is a method that I 20 have used in a number of other published systematic 21 reviews. 22 And so to the degree that people could 23 sort of say: Well, this is what Dr. Smith-Bindman 24 does in a review -- she focuses on stratified 25 results -- these are the methods that have done --</p>	<p>1 A I would agree with that. 2 Q Would you agree that the accuracy of the 3 data abstraction is very important to the validity 4 of the analysis? 5 A I think one of the hallmarks of doing a 6 systematic review is, in fact, to have several 7 people abstract the data points so that you can be 8 assured that there are -- that they're done as 9 accurately as possible, with the understanding of a 10 single data abstraction by a single person can never 11 be perfect. 12 And so the more people that abstract and 13 review, the greater the accuracy of the data. 14 Q Your data abstraction was not perfect, 15 correct? 16 A It was not. 17 MS. O'DELL: Object to the form. 18 Q (BY MR. ZELLERS) The data abstraction that 19 was done by Dr. Hall was not perfect; is that right? 20 MS. O'DELL: Object to the form. 21 A That is correct. 22 Q (BY MR. ZELLERS) If data is misrepresented 23 -- well, strike that. 24 Are you familiar with the 25 term "misrepresentation"?</p>

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<p>1 MS. O'DELL: Object to the form. 2 A I -- I will admit I'm not sure what the 3 context is you're asking -- 4 Q (BY MR. ZELLERS) Well -- 5 A -- about. 6 Q -- let me try to put it in another context 7 or at least ask a question that may get to what I am 8 trying to get to. 9 If data is misrepresented from the 10 original study, the analysis -- the systematic 11 review or the meta-analysis can be comprised, 12 correct? 13 A Yes, I agree. 14 Q Inaccuracy and misrepresentation of data 15 are considered violations of generally accepted 16 standards of research; is that right? 17 MS. O'DELL: Object to the form. 18 A Misrepresentation of data suggests to me 19 that there's some malicious or devious attempt where 20 occasionally there are sometimes simple errors in 21 abstraction when you write down the No. 5 and, in 22 fact, the number really is .5. 23 And often when abstracting data, it's not 24 so much an error of writing down 5 or .5, but it's 25 choosing which number in that manuscript reflects</p>	<p>1 MS. O'DELL: -- form. 2 Q (BY MR. ZELLERS) Go back to my question. 3 And -- and with the background that you have given 4 and with your qualification, do you agree that 5 inaccuracy and misrepresentation are considered 6 violations of generally accepted standards of 7 research? 8 MS. O'DELL: Object to the form. If you 9 don't understand the question, you may ask him to 10 rephrase it. If -- 11 A I -- 12 MS. O'DELL: -- you understand -- 13 A -- I -- 14 MS. O'DELL: -- the question, feel free to 15 answer it. 16 A -- I felt like I had answered the question 17 that I understood, so it -- perhaps I'm not 18 understanding your question. 19 Q (BY MR. ZELLERS) Are you able to answer 20 that question? 21 A Yes. I think that misrepresentation of 22 data is not how I would describe an error in 23 abstraction of data or in a difference of opinion 24 about what value reflects the data point you were 25 looking for. I wouldn't consider that a</p>
<p style="text-align: center;">Page 107</p> <p>1 what you are really trying to capture and get at. 2 So typically there are more than one way 3 to abstract data. It's why it's not -- it -- it's 4 why it's not simply having multiple people so they 5 don't make typos or small extraction mistakes, but 6 rather, that they're making similar choices. 7 And so misrepresentation, the way you have 8 asked it, makes it sound like there's some malicious 9 attempt to get it wrong or to -- to manipulate it 10 rather than the wrong number was chosen for either a 11 simple error or because there was a choice and the 12 choice was not made in a way that two people would 13 agree. And so... 14 Q (BY MR. ZELLERS) There can be differences 15 in the way different folks go about doing a research 16 project or a meta-analysis or a systematic review; 17 is that right? 18 A Yes. 19 Q In order for someone to reproduce or 20 replicate what another epidemiologist or scientist 21 has done, they need to see the steps that the 22 scientist or epidemiologist followed; is that right? 23 A That is -- 24 MS. O'DELL: Object to the -- 25 A -- correct.</p>	<p style="text-align: center;">Page 109</p> <p>1 misrepresentation of data. 2 Q Understood. Let me ask my question once 3 more. 4 A Okay. 5 Q Misrepresentation of data would be a 6 violation of generally accepted standards of 7 research, correct? 8 A I agree that misrepresentation of data 9 would be a violation of research. 10 Q A causal analysis cannot be determined 11 based on a single piece of evidence, but requires 12 consideration of the totality of relevant evidence. 13 Do you agree with that? 14 A I would say in the field of epidemiology, 15 it's unusual to have a single piece of evidence. 16 But I think in some circumstances a single piece of 17 evidence can establish causality. Not typically in 18 epidemiology work. 19 Q What do you mean in your report by "causal 20 association"?</p> <p>21 A So in my report, I did research as -- sort 22 of as I outlined in my Table of Contents of, you 23 know, number of different areas.</p> <p>24 Q Okay. And I'm going to ask you about 25 those. Right now my question just --</p>

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<p>1 A No. 2 Q -- is -- 3 A I understand. I -- 4 Q What -- 5 A -- understand. 6 Q -- do you mean when you say "causal 7 association"? 8 A No. I -- I understand. I -- I apologize. 9 I was not getting there quite quickly enough. 10 Q That's all right. 11 A So I did research on several topics that I 12 thought were highly relevant to coming up with a 13 causal determination, and I put those different 14 pieces of research and expertise together in terms 15 of the causality by specifically looking at the 16 Bradford Hill criteria. 17 Q I -- and I'm going to get to eventually, I 18 hope, why you came up with whatever opinion you came 19 up with. 20 Right now I'm just trying to understand 21 what you mean when you use the words "causal 22 association." 23 MS. O'DELL: Object to the form. Is there 24 a specific case in her report that -- 25 Q (BY MR. ZELLERS) Sure. "Conclusion."</p>	<p>1 Q Is that what you mean by "causal 2 association"? 3 A Yes, it is. 4 Q What are the other causes of ovarian 5 cancer? 6 A So there's a whole long list of risk 7 factors for ovarian cancer. 8 Q What is the difference between a risk 9 factor and a cause? 10 A A risk factor is something that puts you 11 at increased risk, increases the probability that 12 you will get ovarian cancer. And there are 13 innumerable mechanisms and ways that that can go 14 about. 15 But often -- not entirely, but often, you 16 don't think of risk factors as being things that you 17 can alter. That's not entirely true. 18 There are some risk factors. For example, 19 the use of -- well, the -- the most commonly cited 20 risk factor for cancer in general is smoking, and 21 that's clearly something that can be started or 22 ended, that can be changed. 23 But often you think of risk factors as 24 things that can't be changed. So elevation in age, 25 inherited genetics.</p>
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<p>1 Page 41 of the report, In conclusion, substantial 2 evidence supports a strong, positive, and causal 3 association between ovarian cancer and genital 4 exposure to talcum powder products. 5 I just want to know what you mean when you 6 say "causal association." 7 MS. O'DELL: I think she answered your 8 question. 9 But you may answer him, if you understand 10 it. 11 A I -- I think that the -- the four 12 sentences just above that says that, Summary 13 consideration of causality of talc powder products 14 and ovarian cancer using the Bradford Hill. 15 So I -- I believe, using this 16 framework, the Bradford Hill, the components of the 17 Bradford Hill demonstrate that ovarian cancer is 18 caused by regular talcum powder exposure based on 19 the strength of the association, based on the 20 consistency, the temporality of -- of the components 21 of my analysis. 22 Q (BY MR. ZELLERS) Do you believe that 23 perineal use of talcum powder by women on a regular 24 basis causes ovarian cancer? 25 A Yes, I do.</p>	<p>1 So those things lead to ovarian cancer, 2 the risk factors that I describe in my report. But 3 most of them are not things that you can influence. 4 Some of them are, but most of them are not. 5 Where talcum powder products -- the use of 6 perineal talcum powder products -- products is 7 something that can be changed. That -- that is a 8 behavior, and so I think that's the distinction that 9 I would make. 10 Q A risk factor is something that increases 11 the potential risk of a disease, but cannot be 12 changed, correct? 13 MS. O'DELL: Object to the form. 14 A I -- I said that it's often something that 15 can't be changed. But -- but again, there are risk 16 factors that, by convention, we consider risk 17 factors, but that are modifiable. 18 Q (BY MR. ZELLERS) All right. 19 A And I gave smoking as an example. 20 Q A cause of a disease is something that can 21 be modified; is -- is that correct? 22 A It -- 23 MS. O'DELL: Object to the form. 24 A -- again, it is often used that way. 25 Q (BY MR. ZELLERS) What makes a factor cross</p>

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<p>1       the line from being a risk factor to being a cause?</p> <p>2       A I -- I think what I was suggesting is it's 3       a blurry distinction. I think it's by convention 4       things that cannot be modified are typically thought 5       as risk factors. Things that can be modified are 6       generally thought about as being in the causal 7       family -- pathway.</p> <p>8       But there's no distinction that you can 9       separate something that increases your risk of 10      something versus something that causes it. The -- 11      the causal pathways could be the exact same causal 12      pathways in both situations.</p> <p>13      Q What other causes are there of ovarian 14      cancer?</p> <p>15      A So I'm guessing from what I have just said 16      that you are asking about causes and risk factors or 17      would you like them to be --</p> <p>18      Q Well, do you use "risk factor" and "cause" 19      interchangeably or are they different?</p> <p>20      MS. O'DELL: Object to the form; asked and 21      answered.</p> <p>22      A I -- I believe that by convention we 23      typically describe risk factors that are things that 24      cannot be altered.</p> <p>25      But technically there is no difference</p>	<p>1       Smoking is a possible risk factor. 2       So all of those are in the category of 3       risk factors for ovarian cancer.</p> <p>4       Q My question goes to cause. Based upon 5       your review of the literature over the past year, 6       what other causes of ovarian cancer have you 7       identified, if any?</p> <p>8       MS. O'DELL: Objection to form; asked and 9       answered.</p> <p>10      A There are other contributors to ovarian 11      cancer like pelvic inflammatory disease, which I 12      think was on the list of what I just noted.</p> <p>13      There are no other modifiable factors that 14      I would put on the list of things that cause ovarian 15      cancer other than exposure to talc powder products.</p> <p>16      Q (BY MR. ZELLERS) Based upon your review of 17      the literature in terms of a cause for ovarian 18      cancer, the only cause that you have identified is 19      the regular perineal use of talcum powder by women, 20      correct?</p> <p>21      MS. O'DELL: Object to the form. 22      Misstates her testimony.</p> <p>23      A I believe I just said that pelvic 24      inflammatory disease increases the risk of ovarian 25      cancer.</p>
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<p>1       between factors, covariants that influence your 2       cancer risk that you can change or not. So I can 3       tell you the list of things that fall into those two 4       categories.</p> <p>5       Q (BY MR. ZELLERS) All right. What I want 6       to know is: Based upon your review and your 7       research over the past year or so, other than 8       perineal use of talcum powder on a regular basis, 9       what other causes of ovarian cancer are there?</p> <p>10      A So in my report on page 11, I write that, 11      Numerous risk factors are identified for ovarian 12      cancer. Unfortunately, few can be modified by 13      therapies or lifestyle changes. Risk factors 14      include personal or family history of -- of cancer, 15      inherited mutations, BRC1 and BRC2, advanced age, 16      white, race, education, endometriosis.</p> <p>17      Other factors that may increase -- 18      increase ovarian cancer due to estrogen exposure 19      include having no pregnancies or advanced age at 20      first birth, obesity, post menopausal hormone 21      therapy.</p> <p>22      Several factors I list are associated with 23      a decreased risk of ovarian cancer such as breast 24      feeding or multiple pregnancies, oral 25      contraceptions, tubal ligation, or hysterectomy.</p>	<p>1       Q (BY MR. ZELLERS) Is pelvic in -- 2       MS. O'DELL: Excuse me. I'm sorry. Were 3       you finished, Dr. Smith-Bindman? I mean, if you're 4       not, you -- you may continue. If so, I apologize -- 5       A I -- 6       MS. O'DELL: -- for interrupting you both. 7       A -- I was going to add that endometriosis 8       has been noted also as a contributor to -- 9       Q (BY MR. ZELLERS) Is -- are you finished? 10      A -- I am. 11      Q Okay. Is pelvic inflammatory disease a 12      cause of ovarian cancer? 13      A I -- I -- you -- you keep asking me the 14      same question, and I don't understand the 15      distinction that you are asking me to make between 16      something that causes cancer and something that's a 17      risk factor. 18      In both situation -- situations there is a 19      probability of getting a disease versus not getting 20      a disease. There's no 100 percent association, and 21      so most people, as an analogy who smoke cigarettes, 22      do not get lung cancer. It's fewer than 15 percent. 23      Does smoking cause lung cancer? Yes. Is 24      it a risk factor for lung cancer? Yes. Is it a 25      single pathway that everyone who smokes, gets lung</p>

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<p>1 cancer? No.</p> <p>2 So I -- you're asking me to make a</p> <p>3 distinction that I don't make in my head, so I'm --</p> <p>4 I'm not sure -- all of the things I suggested as</p> <p>5 risk factors in some women will cause them to have</p> <p>6 cancer.</p> <p>7 Q You are opining in this case that the</p> <p>8 regular perineal use of talcum powder causes ovarian</p> <p>9 cancer, correct?</p> <p>10 A Yes, I am.</p> <p>11 Q My question is: Does pelvic inflammatory</p> <p>12 disease cause ovarian cancer?</p> <p>13 A In some women, pelvic inflammatory disease</p> <p>14 will cause cancer.</p> <p>15 Q You -- you would list a pelvic</p> <p>16 inflammatory disease as a cause of ovarian cancer;</p> <p>17 is that your testimony?</p> <p>18 MS. O'DELL: Objection, asked and</p> <p>19 answered.</p> <p>20 A I would include pelvic inflammatory</p> <p>21 disease with all the other ovarian cancer risk</p> <p>22 factors like BRCA1 and 2 as being one of a large</p> <p>23 number of contributors and risk factors for ovarian</p> <p>24 cancer.</p> <p>25 There -- there is not -- no other</p>	<p>1 Q (BY MR. ZELLERS) Have you done anything to</p> <p>2 advise the health community about your belief that</p> <p>3 there is a causal association between talcum powder</p> <p>4 use and ovarian cancer?</p> <p>5 A I have mentioned to you that I have spoken</p> <p>6 about my review to several individuals, several</p> <p>7 close mentors of mine in leadership roles within the</p> <p>8 healthcare community. So I --</p> <p>9 Q Who?</p> <p>10 A -- not -- not individuals I am willing to</p> <p>11 name.</p> <p>12 Q You won't tell me who you have talked to</p> <p>13 about your belief or your theory that there's a</p> <p>14 causal association between genital talcum powder use</p> <p>15 and ovarian cancer?</p> <p>16 A I would prefer not to share that</p> <p>17 information.</p> <p>18 Q Have you contacted any public health</p> <p>19 authorities such as the FDA or the National Cancer</p> <p>20 Institute?</p> <p>21 A I have not.</p> <p>22 Q Have you written any type of an op-ed or</p> <p>23 other news article on this topic?</p> <p>24 A Not yet. I have not.</p> <p>25 Q You have done that in the past; is that</p>
<p>1 exposure -- a modifiable exposure that I can think</p> <p>2 of that leads to getting ovarian cancer or causing</p> <p>3 ovarian cancer.</p> <p>4 Q (BY MR. ZELLERS) In -- in your practice as</p> <p>5 a radiologist, you do not evaluate what caused an</p> <p>6 individual patient's ovarian cancer; is that right?</p> <p>7 MS. O'DELL: Object to the form.</p> <p>8 A As a -- a radiologist, I do not.</p> <p>9 Q (BY MR. ZELLERS) You don't diagnose what</p> <p>10 caused any individual patient's ovarian cancer; is</p> <p>11 that right, in your practice -- your medical</p> <p>12 practice.</p> <p>13 MS. O'DELL: Objection, asked and</p> <p>14 answered.</p> <p>15 A I -- I -- I do not. I diagnose ovarian</p> <p>16 cancer. I diagnosis pelvic inflammatory disease.</p> <p>17 But in an individual patient, I wouldn't tell a</p> <p>18 patient why they got ovarian cancer.</p> <p>19 Q (BY MR. ZELLERS) You -- you have not, at</p> <p>20 least as of this time, published on your theory that</p> <p>21 there is a causal association between genital talcum</p> <p>22 powder exposure and ovarian cancer; is that right?</p> <p>23 MS. O'DELL: Object to the form.</p> <p>24 A I have not published on my conclusion that</p> <p>25 talcum powder products causes ovarian cancer.</p>	<p>1 right?</p> <p>2 A Had -- you're asking if I have written</p> <p>3 op-eds on areas I have done research?</p> <p>4 Q Yes.</p> <p>5 A Yes, I have.</p> <p>6 Q Back in 2014, you did an op-ed in The New</p> <p>7 York Times relating to CT scans; is that right?</p> <p>8 A Yes, I did.</p> <p>9 Q All right. You concluded or at least put</p> <p>10 in the op-ed, In 2007, CT scans will cause 29,000</p> <p>11 excess cancer cases and 14,500 excess deaths; is</p> <p>12 that right?</p> <p>13 A I don't have it in front of me. But it</p> <p>14 looks like you do, and so I'm going to guess that</p> <p>15 that's correct.</p> <p>16 Q Well, does that sound right to you?</p> <p>17 A It does sound right.</p> <p>18 Q You put in that editorial or op-ed that in</p> <p>19 your opinion, 3 percent to 5 percent of all future</p> <p>20 cancers may result from exposure to medical imaging</p> <p>21 such as CT scans; is that right?</p> <p>22 MS. O'DELL: And if you have a</p> <p>23 recollection and -- and you -- and your memory</p> <p>24 confirms those -- those facts, please feel free to</p> <p>25 testify to it. If you need to see the op-ed, then</p>

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<p>1     I'm sure counsel would be willing to put it in front 2     of you. 3       A That particular statistic, I don't have to 4     see. I know that static -- 5       Q (BY MR. ZELLERS) All right. 6       A -- so yes. 7       Q You are familiar with the Center for 8     Disease Control, correct? 9       A Yes, I am. 10      Q The CDC or Center for Disease Control is a 11     reputable organization; is that right? 12      MS. O'DELL: Object to the form. 13      A I think they're a very reputable 14     organization. 15      Q (BY MR. ZELLERS) You have served on 16     several committees for the CDC in the past; is that 17     right? 18      A I currently work on several committees 19     with them. 20      Q Do the doctors and scientists in the CDC 21     work hard to protect women's health, based on your 22     experience? 23      A Yes, they do. 24      Q In forming your opinions in this case, did 25     you consider the risk factors that the CDC</p>	<p>1     of many pieces of information I used. 2       Q (BY MR. ZELLERS) Are you aware that in 3     their patient-facing websites, as well as their 4     publicly available information about ovarian cancer, 5     the CDC does not identify perineal use of talcum 6     powder as a risk factor for ovarian cancer? 7       A Yes, I do remember seeing that. 8       Q You don't have any reason to believe that 9     the folks at the CDC have not kept up to date with 10     talc and ovarian cancer epidemiology, do you? 11      MS. O'DELL: Object to the form. 12      A I believe that the comprehensiveness of 13     the review that I did and the amount of time that I 14     put into this review, as I have in -- in many other 15     reviews, requires a very deep dive into the 16     literature. 17       And I do not believe that the CDC has 18     funding or resources to do that kind of deep dive. 19     And so typically what they do is sort of review some 20     things that have been published. Most things, they 21     don't end up reviewing. 22       And so I have no reason to believe anyone 23     at the CDC deliberately didn't do a comprehensive 24     review of the literature, but -- nor do I have any 25     evidence that they did a comprehensive review of the</p>
<p>1     recognizes for ovarian cancer? 2       A From my report, I read an enormous number 3     of articles, and I spent considerably time 4     considering those articles from a data point of 5     view. 6       And I did not, for the most part, weigh 7     other organization's summaries if they were not 8     quantitative and very explicit in what reviews they 9     did, what literature they included. 10      And sometimes they -- organizations did do 11     that, but did not do nearly as -- a comprehensive 12     job. So I -- I would not have relied on any 13     professional organization's reviews unless they were 14     quantitative the way -- the way my own were? 15      MR. ZELLERS: Move to strike as 16     nonresponsive. 17      Q (BY MR. ZELLERS) Let me ask the question 18     again. In forming your opinions in this case, did 19     you consider the risk factors that the CDC 20     recognizing for ovarian cancer? 21      MS. O'DELL: Object to the form. 22      A I saw documents on their websites that 23     list risk factors, and no individual organization's 24     summaries, either for patients or for clinicians, 25     formed a very large piece of my opinion. It was one</p>	<p>1     literature. 2       Q (BY MR. ZELLERS) Do you have any personal 3     knowledge one way or the other as to the extent of 4     the review of the science and literature that the 5     CDC did in compiling its list of risk factors for 6     ovarian cancer? 7       A I -- 8       MS. O'DELL: Object to the form. 9       A -- I would have to refresh my memory by 10     looking at their -- their website and documents. If 11     you provided those, I could. 12       Q (BY MR. ZELLERS) My question is: Do you 13     have any personal knowledge one way or the other as 14     to what the CDC has done with respect to a review of 15     the scientific literature in compiling its list of 16     risk factors for ovarian cancer? 17       A I don't know offhand what they did. And I 18     don't recall when looking at their website, what 19     references they listed. 20       I think if their reference list included a 21     very short -- small number of references, I would 22     have concluded that they had not done a very 23     comprehensive review. 24       Q (BY MR. ZELLERS) My question is: Do you 25     have any personal knowledge as to what the CDC did</p>

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<p>1 or did not do with respect to its review of the 2 literature?</p> <p>3 A Again, I don't know off the top of my 4 head. But I know I went to their website, and I 5 don't --</p> <p>6 Q Other than looking at their website, do 7 you have any personal knowledge?</p> <p>8 A No, I do not.</p> <p>9 Q All right. Have you communicated to 10 anyone at the CDC that you disagree with their 11 position?</p> <p>12 A I -- I'm laughing at the nature of the 13 question. There wouldn't be anyone at the CDC to 14 disagree with.</p> <p>15 Q There -- there's no one at the CDC that 16 you, as a concerned radiologist, could go to and 17 say: Hey, I think that you should list perineal 18 talc use as a risk factor for ovarian cancer?</p> <p>19 MS. O'DELL: Object to the form.</p> <p>20 Q (BY MR. ZELLERS) There's no one you could 21 talk to at the CDC about that?</p> <p>22 A I -- I would -- I would have to confirm 23 that that -- I have been -- I -- I study 24 environmental carcinogens.</p> <p>25 And you pointed out my New York Times</p>	<p>1 MS. O'DELL: Object to the form.</p> <p>2 A Naive to suggest that a single person 3 could just call them and say: I have looked at this 4 topic, and you should change what you are doing.</p> <p>5 Q (BY MR. ZELLERS) Are you familiar with the 6 National Institute of Health?</p> <p>7 A I am.</p> <p>8 Q You have received funding from the 9 National Institute of Health; is that right?</p> <p>10 A I have.</p> <p>11 Q Do you know that the National Institute of 12 Health does not list talc use as a risk factor for 13 ovarian cancer?</p> <p>14 MS. O'DELL: Object to form.</p> <p>15 A Again, I -- yeah, I know that the NCI, PDQ 16 that writes reports for patients and clinicians 17 about risk factors for cancer has a report on risk 18 factors for ovarian cancer and that they conclude 19 that there's inadequate evidence for talc.</p> <p>20 Q (BY MR. ZELLERS) Inadequate evidence, 21 correct?</p> <p>22 A I -- I -- I wasn't finished.</p> <p>23 Q Please finish.</p> <p>24 A So they don't stand -- just to clarify, 25 for the National Institute of Health. It's a very</p>
<p>1 op-ed that put a message out there that said: I 2 think this is an environmental carcinogen.</p> <p>3 And I have spoken about that topic in many 4 forms. I have testified before Congress several 5 times. I testified to the FDA. I have spoken to 6 CMS.</p> <p>7 All of that took years to get people to 8 hear those messages. It was not that: Oh, I see 9 there's a problem here. Let me just tell the top 10 person to do that.</p> <p>11 And -- and so I'm -- you're suggesting 12 there's someone at the CDC that I could call and 13 say: Oh, by the way, I think that's an important 14 topic. I appreciate your giving me that idea. I 15 will move forward once I publish a paper on this 16 topic.</p> <p>17 But -- but that's not nearly as -- as 18 simple as you're suggesting in your question. 19 There's a naiveness there that there's someone at 20 the CDC who would -- who takes responsibility for 21 what they do and -- on all of their websites and you 22 can sort of give them feedback on that.</p> <p>23 Q You believe I'm being naive to think that 24 there's a person responsible at the CDC for 25 compiling a list of risk factors for ovarian cancer?</p>	<p>1 prestige body. It's an organization within a small 2 part of the NCI.</p> <p>3 I know it well, because I served on that 4 committee for many years. I know the process 5 whereby they review the literature and created a 6 whole a bunch of standards within what they do 7 around that.</p> <p>8 And I looked and saw that they updated 9 their summary of talc in 2018. And -- and yet, 10 within that summary, they do list the references 11 that they cite, and they omit a large number of 12 references that are recent.</p> <p>13 So I do know their conclusion. I do not 14 agree with their conclusion. And there were large 15 gaps in their literature. And that update was very 16 recent.</p> <p>17 I -- I told you I don't know the 18 leadership at the CDC, and they don't have a 19 process. But I do know the leadership on this 20 committee and -- and will point out their omissions 21 to this committee.</p> <p>22 Q Well, I haven't gotten to the National 23 Cancer Institute yet.</p> <p>24 My question was: Do you know that NIH, 25 the National Institute of Health, does not list use</p>

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<p>1 of talcum powder as a risk factor for ovarian 2 cancer?</p> <p>3 A So I -- I -- I don't know what -- I'm 4 sorry. I don't know what you're talking about, 5 the --</p> <p>6 Q All right.</p> <p>7 A -- NIH.</p> <p>8 Q Take a look, if you will, at Deposition 9 Exhibit 19, which is captioned NIH steer -- or 10 "SEER, S E E R, Training Modules" and has got "Risk 11 Factors" at the top. 12 (Exhibit 19 was marked for identification 13 and is attached to the transcript.)</p> <p>14 MS. O'DELL: Thank you.</p> <p>15 A So SEER is also a part of National Cancer 16 Institute. It's the surveillance epidemiology --</p> <p>17 MR. LAPINSKI: Have her wait for a 18 question.</p> <p>19 MS. O'DELL: Sorry. Just wait for his 20 question. Yeah, thanks, Dan.</p> <p>21 Q (BY MR. ZELLERS) You recognize Exhibit 19 22 as a training module from NIH and specifically from 23 the National Cancer Institute; is that right?</p> <p>24 A So this says at the top "SEER Training 25 Modules."</p>	<p>1 include modifiable and nonmodifiable parameters. 2 Is that right? And then it lists out 3 nonmodifiable parameters and modifiable parameters; 4 is that right?</p> <p>5 A Yes, that's what this --</p> <p>6 Q Talcum --</p> <p>7 A -- says.</p> <p>8 Q -- powder use is not listed, correct?</p> <p>9 A Correct.</p> <p>10 Q All right. Take a look, if you will -- 11 and this is the document that you were talking about 12 a moment ago -- at Deposition Exhibit 20. 13 (Exhibit 20 was marked for identification 14 and is attached to the transcript.)</p> <p>15 Q (BY MR. ZELLERS) This is the "National 16 Cancer Institute Review of Ovarian, Fallopian Tube, 17 and Primary Peritoneal Cancer Prevention PDQ"; is 18 that right?</p> <p>19 A Yes, it is.</p> <p>20 Q This is the document that you told us a 21 few minutes ago that you disagree with the 22 conclusion; is that right?</p> <p>23 And specifically if you go to page 5 of 9 24 under "Perineal Talc Exposure," the statement from 25 the National Cancer Institute in this document is</p>
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<p>1 I don't know what this is. I know SEER 2 quite well. It's the National Cancer Registries. 3 But I -- I don't -- don't know what this training 4 module is. But I do see that you are showing me 5 some risk factors.</p> <p>6 Q Talc is not listed as a risk factor for 7 ovarian cancer in this document, Exhibit 19, that 8 was updated in June of 2018 from NIH and the 9 National Cancer Institute; is that right?</p> <p>10 A I -- I want to sort of explain my 11 confusion. The SEER, Surveillance, Epidemiology, 12 and End Result, program does not train or educate 13 individuals typically using documents like this.</p> <p>14 Often this is for cancer abstractors to 15 know what information they're asking their 16 abstractors to collect.</p> <p>17 I -- I don't know what this is, but it 18 doesn't look to me like something that's identifying 19 risk factors as much as asking medical chart 20 abstractors to write down information that they're 21 collecting as part of their data.</p> <p>22 Q My question is very simple. This is a 23 list that at the top says "Risk Factors."</p> <p>24 The introductory statement says, The main 25 risk and protective factors for ovarian cancers</p>	<p>1 that the weight of evidence does not support an 2 association between perineal talc exposure and an 3 increased risk of ovarian cancer. Results from 4 case-control and cohort studies are inconsistent. 5 Is that right?</p> <p>6 A That is what they conclude.</p> <p>7 Q This was updated, if you looked at the 8 last page, page 9 of 9, on January 4 of 2019; is 9 that right?</p> <p>10 MS. O'DELL: Object to the form.</p> <p>11 A Can you show me where it's been updated?</p> <p>12 Q (BY MR. ZELLERS) Sure. Look at the very 13 last page. In bold, "Updated January 4, 2019"; is 14 that right?</p> <p>15 A It does say that --</p> <p>16 Q All right.</p> <p>17 A -- yes.</p> <p>18 Q Are there limitations on epidemiological 19 data?</p> <p>20 A Yes, there are.</p> <p>21 Q Do you agree that epi -- epidemiologic 22 data alone cannot permit a determination regarding 23 causation?</p> <p>24 A I'm sorry. Can you just --</p> <p>25 Q Do you need me to say it again or can you</p>

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<p>1     read it off the screen?</p> <p>2     A I can read it off the screen. I think</p> <p>3     epidemiologic data can provide an enormous amount of</p> <p>4     information about causation. But there are other</p> <p>5     considerations that would have to be also taken into</p> <p>6     account to also support that.</p> <p>7     Q Can epidemiologic data alone permit a</p> <p>8     determination regarding causation?</p> <p>9       MS. O'DELL: Object to the form.</p> <p>10      A I think epidemiologic data can be used in</p> <p>11     combination with other data to determine causality,</p> <p>12     but by itself cannot be used alone to determine</p> <p>13     causality.</p> <p>14      Q (BY MR. ZELLERS) The current epidemiologic</p> <p>15     data, as it exists, does not enable someone to</p> <p>16     distinguish between brands of cosmetic talc</p> <p>17     products; is that right?</p> <p>18       MS. O'DELL: Object to the form.</p> <p>19      A I would agree.</p> <p>20      Q (BY MR. ZELLERS) You can't tell in any of</p> <p>21     the 40 plus studies that you reviewed, that the</p> <p>22     women who were involved in those studies used talc</p> <p>23     products manufactured by Johnson &amp; Johnson</p> <p>24     Consumer, Inc., or by another company; is that</p> <p>25     right?</p>	<p>1     awful lot of Johnson &amp; Johnson baby powder over the</p> <p>2     last 50 plus years. And -- and I am --</p> <p>3       Q (BY MR. ZELLERS) And --</p> <p>4       A -- not sure whether there's lots of other</p> <p>5     dominant players in the space. I -- I don't know</p> <p>6     that.</p> <p>7       My impression is that Johnson -- baby</p> <p>8     powder baby is a Johnson &amp; Johnson a product very,</p> <p>9     very often.</p> <p>10      Q But you have not done any type of survey</p> <p>11     --</p> <p>12       A I have --</p> <p>13       Q -- or analysis?</p> <p>14       A -- I have not.</p> <p>15       Q If the biological mechanism by which a</p> <p>16     talcum powder product can increase the risk of</p> <p>17     ovarian cancer is because of a particular</p> <p>18     contaminant or collection of contaminants, but that</p> <p>19     contaminant or collection of contaminants does not</p> <p>20     exist in all talcum powder products, will the</p> <p>21     epidemiologic evidence that exists today allow you</p> <p>22     to see that distinction?</p> <p>23       MS. O'DELL: Object to the form.</p> <p>24       A You're asking about contaminants of talcum</p> <p>25     powder products. My understanding from what I have</p>
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<p>1       MS. O'DELL: Object to the form.</p> <p>2      A I -- I would agree that most of the papers</p> <p>3     that I read did not specify what the source of the</p> <p>4     baby powder was.</p> <p>5      Q (BY MR. ZELLERS) Based on the analysis</p> <p>6     that you have done, you're not able to draw an</p> <p>7     opinion specifically about an increased risk of</p> <p>8     ovarian cancer that is tied to a particular brand of</p> <p>9     talcum powder, correct?</p> <p>10      MS. O'DELL: Object to the form.</p> <p>11      A My impression is that a large proportion</p> <p>12     of the talcum powder products that are available</p> <p>13     happen to be made by Johnson &amp; Johnson, but I do not</p> <p>14     know for any given study -- for most of the studies,</p> <p>15     at least, what kind of talcum powder it was.</p> <p>16      Q (BY MR. ZELLERS) Okay. Is your impression</p> <p>17     that you just shared with us, you know, based on</p> <p>18     information you have received from plaintiffs'</p> <p>19     counsel?</p> <p>20      MS. O'DELL: Object to the form. Don't --</p> <p>21     don't discuss what's been provided by -- let me say</p> <p>22     that again.</p> <p>23       Don't -- don't discuss conversations with</p> <p>24     plaintiffs' counsel. Thank you.</p> <p>25       A I -- my impression is based on seeing an</p>	<p>1     reviewed is that the components of talcum powder</p> <p>2     products include asbestos, include fibrous talc,</p> <p>3     include heavy metals, include fragrances.</p> <p>4       Let's get rid of the header -- the --</p> <p>5     the fragrances. Just the heavy metals, the</p> <p>6     asbestos, and the fibrous talc. My understanding is</p> <p>7     that those are in the same mines as the platy talc,</p> <p>8     which is the desired part of talc.</p> <p>9       To the degree that those are all part and</p> <p>10     parcel of the same product, they're not -- I</p> <p>11     wouldn't think of them as contaminants. I would</p> <p>12     think of them as just part of the product.</p> <p>13       And so to the degree that that product</p> <p>14     cannot be separated, I would be concerned that any</p> <p>15     talcum powder products have all of the above.</p> <p>16       I separated fragrance, because that's</p> <p>17     something that's added. That's not mined directly.</p> <p>18     But the other items, my understanding is that's part</p> <p>19     of the talc.</p> <p>20       Q You don't know one way or the other</p> <p>21     whether talcum powder products contain asbestos, do</p> <p>22     you?</p> <p>23       MS. O'DELL: Object to the form.</p> <p>24       A You're asking me to opine whether talcum</p> <p>25     powder products contain asbestos?</p>

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<p>1 Q (BY MR. ZELLERS) Yes. 2 A Yes, I -- I feel very certain that talcum 3 powder products, at least over many years, contained 4 asbestos. 5 Q Is that part of your opinion in this case? 6 A Yes, it is. 7 Q Is it your opinion in this case that 8 talcum powder products contain trace amounts of 9 heavy metals? 10 A Yes, it is. 11 Q Is it also part of your opinion in this 12 case that talcum powder products contain different 13 fragrance chemicals? 14 A Yes, it is. 15 Q Do you have any opinion as to how many 16 fragrance chemicals are contained in talcum powder 17 manufactured by a Johnson &amp; Johnson company at any 18 time? 19 MS. O'DELL: Object to the form. With 20 regard to "opinion." 21 A I have seen long lists of chemicals and 22 fragrances that are contained. 23 I'm not familiar enough with -- with the 24 testing that was done to understand how that's 25 changed over time in a Johnson &amp; Johnson product</p>	<p>1 manufactured by Johnson &amp; Johnson? 2 MS. O'DELL: Object to the form. 3 A So unlike the question about heavy metals 4 where it sort -- there are traces of heavy metals in 5 other things to which we're exposed regularly, like 6 water. We don't expect any concentrations of 7 asbestos in products that we're exposed to. 8 And so put in that context, while I'm not 9 an expert in the mineralogy, the numbers that I have 10 seen are tens of thousands to millions of fibers 11 that might be in grams of product seem like an awful 12 lot of units or dose of -- of asbestos or fibrous 13 talc. 14 MR. ZELLERS: Move to strike as 15 nonresponsive. 16 Q (BY MR. ZELLERS) You do not have personal 17 knowledge as to any amounts or concentrations of 18 asbestos in talcum powder manufactured by Johnson &amp; 19 Johnson -- 20 MS. O'DELL: Objection. 21 Q (BY MR. ZELLERS) -- correct? 22 MS. O'DELL: Objection, asked and 23 answered. 24 A I have seen several reports of Johnson &amp;</p>
<p>versus other talcum powder products. 1 Q (BY MR. ZELLERS) Do you have any opinion 2 or knowledge as to the amount or concentration of 3 particular fragrance chemicals that are contained in 4 talcum powder manufactured by Johnson &amp; Johnson? 5 A I -- I do not. 6 Q Do you have any opinion or knowledge as to 7 the amount or concentration of trace chemicals 8 -- strike that -- trace heavy metals that may be 9 contained in talcum powder manufactured by Johnson &amp; 10 Johnson? 11 A I have seen reports of the amounts that -- 12 you know, sort of in the ballpark of hundreds to 13 thousands of parts per million. 14 But I'm not an expert in understanding 15 those numbers in comparison to the concentrations in 16 other things that we're exposed to. They're much 17 higher. They're orders of magnitudes higher, but 18 I'm not an expert to understand how those different 19 concentrations might be expected to have an 20 influence on talc. 21 Q The same question with respect to 22 asbestos. Do you have any opinion or knowledge as 23 to the amount or concentration of asbestos that you 24 believe is contained in any talcum powder</p>	<p>1 Johnson products that have been tested for 2 concentrations of asbestos or asbestiform talc that 3 have concentrations shown kind of in ranges of a 4 tenth of a percent or, as I mentioned, tens of 5 thousands or mid -- millions of fibers. 6 And those have been tested by -- by 7 several different people, but coming up with units 8 of dose within Johnson &amp; Johnson talcum powder 9 products. 10 Q (BY MR. ZELLERS) You're not a geologist, 11 correct? 12 A I am not a geo -- 13 Q You're -- 14 A -- logist. 15 Q -- not a mineralogist, correct? 16 A I am not. 17 Q You have reviewed some expert reports from 18 Dr. Longo; is that right? 19 A Among others, yes. 20 Q You have reviewed some testing reports. 21 Some purportedly show that there is asbestos present 22 in talcum powder and some that show that there's not 23 asbestos in talcum powder; is that right? 24 MS. O'DELL: Object to the form. 25 A I have seen a lot of reports that have</p>

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<p>1 shown the presence of talcum powder containing 2 asbestos and fibrous talc. 3 You listed some of those, the Longo 4 reports, a bunch of publications in the literature 5 such as Blount's. 6 I have seen some testing from Dr. Hopkins, 7 from Imerys, from Cooke. I have also seen some 8 negative reports. 9 Q (BY MR. ZELLERS) The answer to my question 10 is: Yes, you have seen testing that purportedly 11 shows there to be some asbestos in the J&amp;J 12 manufactured talcum powder and you have seen reports 13 that, you know, indicate there's not asbestos in the 14 talcum powder; is that fair? 15 A The way that you have described it makes 16 it seem like I have seen comprehensive reports that 17 have shown in totality there is asbestos and reports 18 that have shown there's not. I haven't seen that. 19 Q All right. 20 A I have seen reports that have shown in 21 totality there are. I have seen individual samples 22 that have shown there's not asbestos in those 23 individual samples. 24 But I haven't seen a systematic report 25 that have shown in, for example, a large number of</p>	<p>1 off the record for a moment. 2 THE VIDEOGRAPHER: We're off the record at 3 1:36 p.m. 4 (A break was taken from 1:36 p.m. to 5 1:37 p.m.) 6 THE VIDEOGRAPHER: We are back on the 7 record. The time is 1:37 p.m. 8 Q (BY MR. ZELLERS) Dr. Smith-Bindman, you 9 had recalled, I believe, the name of the fourth 10 plaintiff lawyer that you met with? 11 A Carmen Scott. 12 Q I want to ask you some questions about the 13 systematic review that you did. You have not 14 published that, correct? 15 A I have not. 16 Q If at any point you do publish your 17 systematic review, would you disclose that you are a 18 paid expert for the Plaintiffs in the talcum powder 19 litigation? 20 A Yes, I would. 21 Q You would expect any expert who is paid to 22 perform a review or who has a study funded by 23 Plaintiffs to make that disclosure, correct? 24 MS. O'DELL: Object to the form. 25 A My understanding from my experience is</p>
<p style="text-align: center;">Page 143</p> <p>1 specimens, none had asbestos. I haven't seen that. 2 Q You have seen, at least in large part, the 3 information that's been provided to you by 4 plaintiffs' attorneys; is that right? 5 MS. O'DELL: Object to the form. to the 6 form. 7 A I think some of the public -- published 8 literature was not provided by plaintiff attorneys 9 and some has been, such as the Longo reports. 10 MR. ZELLERS: All right. 11 MS. O'DELL: Mike, we have been going 12 about an hour and 30 minutes. And our lunch is 13 here, so is this a good time. 14 MR. ZELLERS: Sure -- 15 MS. O'DELL: -- for a break? 16 MR. ZELLERS: -- of course. 17 THE VIDEOGRAPHER: This marks the end of 18 Disc 2. We are off the record at 12:37 p.m. 19 (A break was taken from 12:37 p.m. to 20 1:36 p.m.) 21 THE VIDEOGRAPHER: We are back on the 22 record. This marks the beginning of Disc No. 3 in 23 the deposition of Dr. Rebecca Smith-Bindman. The 24 time is 1:36 p.m. 25 MR. ZELLERS: Dr. Smith-Bindman, let's go</p>	<p style="text-align: center;">Page 145</p> <p>1 that different journals require different 2 disclosures. So if you're paid by someone, you 3 typically would have to disclose, but the detail 4 would -- would vary by journal. 5 Q (BY MR. ZELLERS) What methodology or 6 methodologies did you use to arrive at your opinion 7 that regular use of talcum powder increases a 8 woman's risk of developing invasive serous cancer by 9 about 50 percent? 10 A So I would say there were two parts. The 11 first part is my systematic review of the published 12 literature. I think I mentioned earlier that I have 13 published several systematic reviews. 14 And the mechanism of perform -- performing 15 those systematic reviews are both ones that I have 16 personally used and ones that I was involved in 17 developing the methodology as part of my work on the 18 Cochrane collaboration. 19 So it involves doing a very standardized 20 search, creating an approach for abstracting data, 21 abstracting the data. An approach that I used for 22 summarizing the data, which usually is looking at 23 stratified results, results in sort of specific 24 categories as opposed to broad categories. 25 Statistically summarizing the results and showing</p>

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<p>1 them.</p> <p>2 So part of my conclusion was based on my 3 own systematic review. And then part of my 4 conclusion was based on my review of the published 5 literature on the actual epidemiology data, as well 6 as other considerations that went into consideration 7 of the Bradford Hill criteria such as mechanistic 8 data and any other requirements of Bradford Hill.</p> <p>9 Q Tell us step by step how you performed 10 your systematic review or analysis. And now I'm 11 referring to the meta-analysis or meta-analysis-like 12 review that you did.</p> <p>13 A Okay. So I would just like to do a slight 14 preamble to that, which is that the direction that 15 my review took was partly informed by having read 16 through a number of articles on the topic. So 17 determining sort of where there was a gap, what was 18 the most important area to focus on. So that sort 19 of was the background.</p> <p>20 And then for the review, the literature 21 search is the first step. So you want to broadly 22 identify all relevant literature, published and 23 unpublished, to include.</p> <p>24 And that includes searching on several 25 databases -- PubMed was -- Medline were -- Embase,</p>	<p>1 through those and to review to make sure that they 2 had primary data.</p> <p>3 So I was only interested in studies that 4 had primary data, which meant that review articles 5 or editorials or letters to the editors or opinion 6 pieces were dropped from that list.</p> <p>7 So then I had data that were -- I had 8 studies that had primary data, so that became my 9 list of articles.</p> <p>10 And -- and then I created a data 11 abstraction form for what variables I wanted to 12 include. So some variables are the number of cases; 13 the number of controls; the kind of study design 14 whether it was a case-control study or another 15 design.</p> <p>16 It included -- included the groups that I 17 cared most about. So you mentioned serous cancer, 18 so I included what kind of histologies they looked 19 at.</p> <p>20 I included in my initial data form, 21 variables that I ended up not using in my review 22 because I didn't have enough data.</p> <p>23 So in my initial draft of variables that I 24 might like to abstract was the relationship in pre 25 versus postmenopausal women.</p>
<p style="text-align: center;">Page 147</p> <p>1 Scopus were -- were databases that I started my 2 search.</p> <p>3 I included in the report some of the 4 keywords I used, keywords including "ovarian cancer, 5 talc, perineal powder, genital powder."</p> <p>6 So I generated a long list of articles 7 that I retrieved and then reviewed the references 8 for each of those articles, which usually doesn't 9 identify a lot more articles, but usually identifies 10 a few that I may have missed in my search, but that 11 other people have found in their reviews or 12 systematic reviews. So the first step was to 13 identify the literature.</p> <p>14 Q What was the next step? And again, I'm 15 focused on your methodology for the systematic 16 review or analysis that you did, as reflected in 17 your report?</p> <p>18 A So the second step is: Identified a large 19 number of publications, but some of them may not 20 have been particularly relevant.</p> <p>21 For example, they may have sounded in the 22 title like they were primary data, but they may have 23 actually only been review data.</p> <p>24 So Step 2 is to review the abstracts for 25 all of those identified articles and then to go</p>	<p style="text-align: center;">Page 149</p> <p>1 But when I ended up reviewing articles, 2 there just was not -- not enough data there to make 3 sense of, so I created a data abstraction form.</p> <p>4 I then went one by one through the 5 articles which I organized and abstracted the data 6 that I had set out to do.</p> <p>7 And in the course of doing that, I would 8 ensure that the participants that were described in 9 those reports were, in fact, unique subjects.</p> <p>10 So within this field, just like many 11 fields, people sometimes publish an individual 12 patient in more than one study. And -- and you 13 don't want to include that, if you can.</p> <p>14 So as part of my review was to determine 15 how independent the patients were and to make a note 16 if there was overlap.</p> <p>17 I also didn't mention some of the features 18 that I abstracted. But it wasn't just the primary 19 result, which was what was the adjusted odds ratio 20 or risk ratio associated with exposure to talcum 21 powder products, but it was also -- what I was most 22 interested in is quantifying that exposure to a 23 degree that had not been present in all the 24 individual reviews that I had previously said. So I 25 was interested primarily in abstracting data on</p>

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<p>1 regular exposure to talcum powder. 2 So when I went through the articles, I 3 noted whether -- what the point estimates were, but 4 also whether they had information on all of the 5 things that were in my database. 6 I went through and abstracted data several 7 times. 8 Q Okay. Well, that's -- 9 A Oh. 10 MS. O'DELL: She may not be done but -- 11 Q (BY MR. ZELLERS) Well, I understand. So 12 I'm just trying to go through your methodology here. 13 So after you abstracted the data and 14 included it or put it on your data abstraction form 15 for each study, what was the next step in your 16 systematic review? 17 MS. O'DELL: So just continue on, Doctor, 18 what your process was. 19 A Okay. Well -- so the next step was to 20 decide which -- which of those papers might have 21 been missing data. 22 So once I abstracted the data, there were 23 gaps almost certainly in the data. And so I -- I 24 just wanted to emphasize -- I was starting to say 25 this earlier -- that I -- I went back to the papers</p>	<p>1 Q That's what Dr. Hall did; is that right? 2 A That is what Dr. Hall did. I should have 3 a caveat there. We -- she absolutely lead that part 4 of the analysis, but I reviewed every step of that 5 very carefully. 6 And there were several places that I -- 7 I -- I saw errors in some of the calculations that 8 we went back and forth on to correct those 9 calculation errors. 10 Q Have you completed your methodology or the 11 different steps in your methodology? 12 MS. O'DELL: In terms of the 13 meta-analysis? 14 Q (BY MR. ZELLERS) Yes. In terms of the 15 systematic review or meta-analysis that you did. 16 A I believe I have highlighted all the 17 steps. 18 Q You tried or did correct any errors in 19 calculations or numbers by Dr. Hall; is that right? 20 MS. O'DELL: Object to the form. 21 A Yes, I did. 22 Q (BY MR. ZELLERS) Did anyone else review 23 your calculations and Dr. Hall's calculations? 24 A No. Just the two of us. 25 You said something, that I corrected some</p>
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<p>1 and tried to sort of ensure that I was consistently 2 pulling the data in my database requirement for 3 every study. 4 After I did that, the next step would be 5 to combine the data statistically. And that would 6 be to pro -- perform steps to figure out how the 7 data can be -- could be combined. 8 And that required looking at issues of 9 consistency across the studies or heterogeneity and 10 then to make sure that the sub analysis that I 11 wanted to do -- the stratified analysis that I 12 wanted to do could be done based on whether I had 13 data for each of those studies in the stratified 14 category. 15 So as an example, I wanted to make sure 16 that I -- I had whatever information was in the 17 paper that could then go to the next step of 18 analysis. 19 And so that's when, actually, I reached 20 out to a biostatistician with -- expert in the 21 biostatistical aspect to do two things: To both 22 double-check my numbers and ensure that the numbers 23 that -- had been abstracted correctly and then to do 24 the biostatistical analysis and generate the 25 graphical representation of the data.</p>	<p>1 of her numbers. I -- she also corrected some of my 2 numbers. 3 It was a bi-directional two set of eyes on 4 all of the analysis -- 5 Q I -- 6 A -- and abstractions. 7 Q -- essentially what you did is you 8 analyzed the studies. You abstracted data on each 9 of the studies on your Data Abstraction Form, 10 correct? 11 A Yes. 12 Q Have you produced your Data Abstraction 13 Forms to us for review? 14 A I -- I believe I have. 15 Q All right. You have them available; is 16 that right? 17 A Yes. 18 Q And this would be a form for each of the 19 studies in which you went through and you abstracted 20 data; is that right? 21 A It's -- 22 MS. O'DELL: Object to the form. Sorry. 23 Go ahead. 24 A -- yeah, it's -- it's an electronic 25 database. It's an Excel file.</p>

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<p>1 Q (BY MR. ZELLERS) But there would be a form 2 or an Excel sheet for each of the studies where you 3 abstracted the data; is that right?</p> <p>4 MS. O'DELL: Object to the form.</p> <p>5 A There's an Excel sheet with each study 6 listed as a separate line of data and many, many 7 rows -- columns for each -- it's not a physical 8 piece of paper and...</p> <p>9 Q (BY MR. ZELLERS) But it's something that 10 could be printed out; is that right?</p> <p>11 A Yes.</p> <p>12 Q All right. Did you develop any type of 13 protocol setting forth the different steps that you 14 followed to do your systematic analysis that you 15 have told us about?</p> <p>16 A The protocol that I followed for these 17 steps is a very well-established, well-published -- 18 including by myself from any prior reviews -- 19 protocols.</p> <p>20 Q My question is: Did you write down 21 anywhere, the protocol that you followed for doing 22 this particular systematic review?</p> <p>23 MS. O'DELL: Object to the form.</p> <p>24 A I did not specifically write down for this 25 review that I would do a literature search or</p>	<p>1 times week or more as possible and that I would 2 focus on invasive serous cancer wherever possible. 3 And so if that -- if that's what you mean 4 by my "protocol," then yes, that was written down 5 ahead of time.</p> <p>6 Q (BY MR. ZELLERS) I'm confused. Do you 7 define -- well -- and No. 1, did you produce that 8 protocol?</p> <p>9 A So I have -- I have my notes and -- which 10 was part of the documents that you saw earlier 11 today.</p> <p>12 Q The notes, you would describe as your 13 protocol or an outline of your methodology?</p> <p>14 A Yes.</p> <p>15 Q All right. We'll mark your notes, which 16 are your protocol, as Exhibit 21. (Exhibit 21 was marked for identification 17 and is attached to the transcript.)</p> <p>18 Q (BY MR. ZELLERS) And it's just the one 19 side sheet; is that right?</p> <p>20 A I believe I provided other documents in 21 the datasheet that also has the notes of what group 22 I was focusing on in e-mails that I have sent you.</p> <p>23 Q That would be other materials that you 24 have produced; is --</p>
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<p>1 Q abstract data and record points and then do the 2 analysis.</p> <p>3 Q (BY MR. ZELLERS) What you have done in 4 your systematic review is a subgroup analysis of 5 those studies that you thought should be included; 6 is that fair?</p> <p>7 A I call it a stratified analysis rather 8 than a subgroup analysis. Usually a subgroup 9 analysis is usually used to describe only limiting 10 to certain groups of patients as opposed to some 11 questions. So I -- I'm not sure that there's a 12 distinction but...</p> <p>13 Q Well, you -- whether we call it a subgroup 14 or whether we call it a stratified analysis, you 15 went through the studies to try to find the studies 16 that would give you information on women who were 17 regular users, as you defined "regular users," and 18 who developed invasive serous ovarian cancer, 19 correct?</p> <p>20 MS. O'DELL: Object to the form.</p> <p>21 A Yes, that's what I did.</p> <p>22 When you asked about whether I have a 23 protocol written down, I have written that I was 24 going to abstract information about regular use of 25 talc powder products defined as closely as three</p>	<p>1 A That's -- 2 Q -- the right? 3 A -- correct. 4 Q To your knowledge, there's nothing that 5 you have not produced -- 6 A No. 7 Q -- relating -- hold -- 8 A Okay. 9 Q -- on. Let me finish. 10 There's nothing, to your knowledge, that 11 you have not produced relating to your analysis; is 12 that right?</p> <p>13 A That's correct. 14 Q I was confused. I thought you stated a 15 moment ago that you defined "regular use" as the use 16 of talcum powder three times a week or more. 17 Is that your definition of "regular use"?</p> <p>18 A I -- 19 MS. O'DELL: Object to the form. 20 A -- I describe the definition in my report on page 32. And -- 22 Q (BY MR. ZELLERS) My question just is: Is 23 that the correct definition or did you use a 24 different definition of "regular use"?</p> <p>25 MS. O'DELL: Object to the form. You may</p>

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<p>1 describe your --</p> <p>2 A So I -- I --</p> <p>3 MS. O'DELL: -- definition.</p> <p>4 A -- have listed how I have defined it. And</p> <p>5 it's a little bit more -- more nuanced than what you</p> <p>6 have just asked me to confirm.</p> <p>7 Q (BY MR. ZELLERS) What is your definition</p> <p>8 of "regular use" with respect to the systematic</p> <p>9 review and analysis that you did?</p> <p>10 A So I have written, Regular use was defined</p> <p>11 ideally as daily or at least more than three uses</p> <p>12 per week.</p> <p>13 Q More than three uses a week; is that</p> <p>14 right?</p> <p>15 A I -- I wasn't finished. May I finish?</p> <p>16 Q Sure.</p> <p>17 A "I also accepted studies that defined</p> <p>18 "use" as regular where the description made it clear</p> <p>19 that this was regular use.</p> <p>20 A study that reported regular use, but</p> <p>21 defined it as less -- as used less frequency --</p> <p>22 at -- use of less than as -- frequency were not</p> <p>23 included.</p> <p>24 Regular use was selected to differentiate</p> <p>25 occasional use, which may include one-time</p>	<p>1 A -- page --</p> <p>2 MS. O'DELL: -- go ahead.</p> <p>3 A -- 32.</p> <p>4 Q (BY MR. ZELLERS) You have defined "regular</p> <p>5 use" in your report on page 32; is that right?</p> <p>6 A Yes.</p> <p>7 Q What is Dr. Hall's field of expertise?</p> <p>8 A She is a biostatistician who is -- does a</p> <p>9 lot of summaries of systematic review.</p> <p>10 Q You are not a biostatistician; is that</p> <p>11 right?</p> <p>12 A I did a two-year post-graduate fellowship</p> <p>13 in the Department of Epidemiology and Biostatistics,</p> <p>14 have taken many courses in biostatistician --</p> <p>15 biostatistics, and have thought classes in biostatus</p> <p>16 --</p> <p>17 Q Do you con --</p> <p>18 A -- statistics.</p> <p>19 Q -- do you consider yourself to be an</p> <p>20 expert biostatistician?</p> <p>21 A I consider myself an expert in</p> <p>22 biostatistics.</p> <p>23 Q And Dr. Hall is also an expert in</p> <p>24 biostatistics; is that right?</p> <p>25 A Yes.</p>
<p style="text-align: center;">Page 159</p> <p>1 infrequent use or used along a particular time of a</p> <p>2 woman's menstrual cycle from sustained use.</p> <p>3 Studies that ask participants a single</p> <p>4 question about every use of talc without further</p> <p>5 quantification of exposure were not included for the</p> <p>6 summary.</p> <p>7 For example, Perdue reported that 52 to</p> <p>8 57 percent of women ever using talc without further</p> <p>9 quantification was not included."</p> <p>10 THE COURT REPORTER: Please slow down.</p> <p>11 Q (BY MR. ZELLERS) Okay.</p> <p>12 A Yes.</p> <p>13 Q Doctor, I just wanted to know your</p> <p>14 definition of "regular use."</p> <p>15 A I -- I -- I have spent considerable time</p> <p>16 both writing my definition and applying it to --</p> <p>17 Q What --</p> <p>18 A -- the papers.</p> <p>19 Q -- what page --</p> <p>20 MS. O'DELL: Excuse me, sir. If you were</p> <p>21 asking for the page, she can direct you to the page</p> <p>22 --</p> <p>23 Q (BY MR. ZELLERS) What page --</p> <p>24 A So --</p> <p>25 MS. O'DELL: Doctor --</p>	<p style="text-align: center;">Page 161</p> <p>1 Q Do you know -- well, did you conduct your</p> <p>2 systematic review and analysis using the PRISMA</p> <p>3 standards?</p> <p>4 A Yes.</p> <p>5 Q And those are the preferred reporting</p> <p>6 items for systematic reviews and meta-analyses; is</p> <p>7 that right?</p> <p>8 A Yes.</p> <p>9 Q What materials did you provide to Dr. Hall</p> <p>10 to assist you with your review?</p> <p>11 A I provided her with the data abstraction</p> <p>12 table that had information about each of the</p> <p>13 included studies.</p> <p>14 Q The data abstraction table that you</p> <p>15 prepared; is that right?</p> <p>16 A Yes.</p> <p>17 Q What specifically did Dr. Hall do to</p> <p>18 assist you?</p> <p>19 A She did two things. She personally</p> <p>20 reabstracted data from all of the publications.</p> <p>21 Most of those publications she found on her own.</p> <p>22 But for a couple, she was not able to find them, and</p> <p>23 I provided electronic versions of them.</p> <p>24 And then she statistically combined and</p> <p>25 compared the study to assess for heterogeneity to</p>

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<p>1 calculate forest plots and summary-weighted 2 estimates. 3 Q What could Dr. Hall do with respect to 4 your analysis that you could not? 5 A I did not know how to use the software to 6 generate the graphs. And I thought that by the time 7 I learned how to use that software, it would be a 8 lot more efficient for her to generate them. 9 Q What did you do to check Dr. Hall's work 10 to make sure it was accurate? 11 A Dr. Hall sent me back my data abstraction 12 database where she had double-checked all of my 13 numbers and sent -- I think there were several data 14 points where she had questions about either whether 15 I abstracted the right number or put it in the right 16 category. 17 And of all of the items that she had 18 suggestions -- I think it was a small number -- I 19 went back to the original article to -- to confirm 20 or refute whether I agreed with her changes or not. 21 Sort of a way to -- by consensus to decide what the 22 right answer was. That was part of what I did. I 23 - 24 Q How -- did you finish? 25 A -- no.</p>	<p>1 A I would not do it in that order. I -- I 2 generated the research questions first. 3 Q (BY MR. ZELLERS) You generated the 4 research questions after doing the initial 5 literature review you told us about this morning, 6 correct? 7 A I -- 8 MS. O'DELL: Object to the form. 9 A -- yes. 10 Q (BY MR. ZELLERS) All right. You 11 identified ten studies that discuss what you define 12 as "regular talc powder product use and risk of 13 ovarian cancer," and those are what you list on a 14 page 33 of your report; is that right? 15 A That's close to correct. I would include 16 in that another study, the Terry study, which is a 17 large study that pulls data from a bunch of other 18 component studies -- you can see on the top of 19 page 34 -- whether or not Terry was included or 20 excluded. The results were basically identical. 21 Q I'm just looking at your report. Your 22 report, on page 33, in Figure 2, you identify ten 23 studies that discuss what you define as "regular 24 talc powder product use and risk of ovarian cancer," 25 correct?</p>
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<p>1 Q All right. Well, finish. 2 A She also generated -- she -- we went back 3 and forth. She had a bunch of questions. 4 But she also generated summary estimates. 5 And there were a bunch of categories that I asked 6 her to do. Some of those summary estimates, to me, 7 seemed like they didn't totally make sense. 8 So one analysis used seven studies and one 9 used nine, but it had the same final odds ratio out 10 to three digits. And it should have been the same 11 result perhaps, but not out to three digits. 12 So I went through those and sort of said: 13 Look, can you re-double-check this to make sure that 14 the weighting was correct? 15 And in one or two cases she came back and 16 said: No, the weighting was not correct. 17 So I rechecked every graph and every 18 number that she generated. 19 Q Ultimately, you identified -- let me 20 withdraw that. 21 You reviewed the studies; you did your 22 data abstraction; and you formulated your research 23 question or questions for the systematic review, 24 correct? 25 MS. O'DELL: Object to the form.</p>	<p>1 MS. O'DELL: Object to the form. 2 A So that -- that paragraph is continued on 3 page 34, the next page at the top which says, The 4 primary analysis of this excluded Terry, but the 5 results were nearly identical if Terry was included. 6 Q (BY MR. ZELLERS) You could have included 7 Terry as part of Figure 2, and that would have been 8 an 11th study; is that right? 9 A Yes, that's correct. 10 Q Why did you not include Terry in your 11 analysis and -- in Figure 2? 12 A Terry included, within its -- within her 13 assembled papers, other patients that are already 14 included in Figure 2. 15 And including Terry would have listed -- 16 would have weighted some patients more than once. 17 Q Is there, to your knowledge, any 18 duplication or overlap in the patients for the ten 19 studies that you list in Figure 2 on page 33 of your 20 report? 21 A To the degree that I could eliminate 22 overlap, I did. 23 Q Is there overlap in some of the patients 24 and some of the studies? 25 A I would have to look at it again to remind</p>

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<p>1 myself if there is any overlap. I -- I don't 2 believe there is. 3 And any overlap, I made every effort to 4 get rid of. I would have to look at those papers a 5 little bit more closely to remember if there was any 6 overlap. 7 I -- I know there was a lot of overlap if 8 I included Terry, which is why that was an important 9 exclusion. 10 Q How did you identify these ten studies 11 that you list in Figure 2? 12 A So I -- I did not identify those studies. 13 That was what -- Dr. Hall used the data that I 14 provided -- to identify which studies had the -- the 15 appropriate data to look at -- look at this. 16 Q How did Dr. Hall identify these ten 17 studies as being the ones to include in Figure 2? 18 A These were the studies that had data on 19 daily talc powder -- powder products. 20 Q You only used subsets of data from these 21 ten studies -- those ten studies listed in 22 Figure 2 -- to reach your conclusions, correct? 23 MS. O'DELL: Object to the form. 24 A I don't remember offhand if I used all of 25 the data from these studies or subsets of data from</p>	<p>1 A I -- I would not -- the individual studies 2 are shown with the confidence interval around those 3 point estimates. 4 One way to establish statistical 5 significance is -- is that statistically different 6 within an individual study than one. 7 But I don't believe that only two of these 8 show statistical significance as a group of studies. 9 So if you're asking if two don't overlap one, then I 10 would agree with you. If you're asking if these 11 together show statistical -- 12 Q (BY MR. ZELLERS) I'm going to ask you -- 13 MS. O'DELL: Excuse me. Sorry. Let her 14 finish. Sorry. 15 Q (BY MR. ZELLERS) Did you finish? 16 A I -- I'm trying to understand if you're 17 asking me if the original studies here show -- or 18 if -- just each line by itself. 19 Q If we go line by line for these ten 20 studies, only two of these ten studies demonstrate 21 statistical significance; is that right? 22 A Yes. 23 Q Yet you conclude by looking at all ten of 24 the studies that there is statistical significance; 25 is that right?</p>
<p>1 these studies to reach my conclusion. 2 There were only data from these ten 3 studies included in this figure, but I'm not sure if 4 I used all of the data from those studies or 5 subsets, as you asked. 6 Q (BY MR. ZELLERS) Would you agree that only 7 two of the ten studies in Figure 2 demonstrates 8 statistical significance? 9 A I would agree that taken altogether, these 10 studies show statistical significance. But I think 11 you're asking if they weren't taken together, if the 12 original studies were used, would those individual 13 studies show statistical significance? Is that what 14 you are asking? 15 Q No. You have listed out ten studies in 16 Figure 2; is that correct? 17 A Yes. 18 Q You are not aware whether you used all of 19 data from those studies for your systematic review 20 and analysis or subsets of the data, correct? 21 MS. O'DELL: Object to the form. 22 A Yes, that is correct. 23 Q (BY MR. ZELLERS) Would you agree that only 24 two of the ten studies in Figure 2 demonstrate 25 statistical significance?</p>	<p>1 A So the way you're asking the question 2 suggests that when you're combining studies in a 3 systematic review, you care about the initial sample 4 size of the question. 5 And so I conclude taken as a group of 6 studies, the individual sample size or power of the 7 individual associations is not sufficient to come up 8 with a narrow confidence interval. 9 And the width of the confidence interval 10 suggests that while the point estimate is greater 11 than one, the confidence interval overlaps one, 12 meaning you can't be sure if it's significantly 13 significant. 14 But the purpose of the systematic review 15 is to combine those studies together. So combining 16 them together gives a very powerful, positive 17 estimate that's very different than one. 18 Q Okay. 19 MR. ZELLERS: Move to strike as 20 nonresponsive. 21 Q (BY MR. ZELLERS) My question is: When you 22 looked at the ten studies together, you determined 23 that there was statistical significance; is that 24 right? 25 A Yes.</p>

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<p>1 Q How did you make that calculation? How 2 did you calculate statistical significance from 3 those ten studies?</p> <p>4 MS. O'DELL: Object to the form. I 5 believe she has already answered that, but you may 6 describe that again, Doctor.</p> <p>7 A So the software that was used, is that 8 what you are asking?</p> <p>9 Q (BY MR. ZELLERS) I want to know how it is 10 that you calculated that these ten studies -- eight 11 of which did not demonstrate statistical 12 significance when they were looked at together -- 13 were statistically significant?</p> <p>14 A So I need to provide you with just a 15 little background on the field of systematic reviews 16 to answer that question.</p> <p>17 Q All right. Well, try to be as direct as 18 you can, because I have only got a certain amount of 19 time.</p> <p>20 A Are you able to answer the question?</p> <p>21 Q Absolutely.</p> <p>22 Q Then please tell us how you calculated 23 statistical significance for the RE model.</p> <p>24 A So we looked at adjusted odds ratios of 25 each of the studies. We weighted them based on the</p>	<p>1 interval around the odds ratio for each of these ten 2 studies?</p> <p>3 MS. O'DELL: Object to the form.</p> <p>4 A So most of the studies, if not all of 5 those, would have had published adjusted odds ratios 6 in the original calculations.</p> <p>7 I believe one of the studies, the Gertig, 8 was an adjusted risk ratio, not an odds ratio, which 9 had a bit of back-and-forth discussion with the 10 biostatistician.</p> <p>11 And we decided they were essentially 12 equivalent. But the other ones would have been 13 extracted from the initial studies.</p> <p>14 Q The confidence intervals for the ten 15 studies on -- in Figure 2, page 33 of your report 16 came from the studies themselves?</p> <p>17 A Yes.</p> <p>18 Q Were there any other selection criteria 19 that you used to identify these ten studies, other 20 than what you have testified to?</p> <p>21 A No.</p> <p>22 Q Of the 43 or so studies that had primary 23 data, are these the only studies, other than Terry, 24 that discuss regular use of talc?</p> <p>25 A So I am just looking for where my fullest</p>
<p>1 standard errors for each of them and calculated sort 2 of an overlying association when basically the size 3 of each study, the point estimate of each study were 4 taken into consideration.</p> <p>5 So taking them altogether, it allows the 6 summary estimate, if you look, to have a much 7 narrower confidence interval than the individual 8 study.</p> <p>9 So you use the weight of all the studies 10 to combine the -- to give you a summary estimate.</p> <p>11 Q Where can I see the weighting and the 12 calculation that you did to come up with the 13 statistically significant number?</p> <p>14 A So the -- the name of the software we used 15 was in Metafor package in R. "R" is a program.</p> <p>16 The data set that I provided to you of the 17 extracted database, if you put those numbers -- if 18 anyone puts those numbers in the Metafor package in 19 R and instructs the software that you want to apply 20 a -- linear mixed models to study that data set, you 21 will get the exact same estimate that I got.</p> <p>22 Q And I will be able to see that from the 23 documents that you have produced; is that right?</p> <p>24 A Absolutely.</p> <p>25 Q How did you calculate the confidence</p>	<p>1 of studies is in the report. I think it's pages 23 2 and 24.</p> <p>3 The fullest of studies that I looked at 4 included -- I think there were seven systematic 5 reviews. So the systematic reviews did not 6 contribute to the -- they were not eligible for -- 7 for -- for my own review because they didn't have 8 primary data, and they would overlap.</p> <p>9 And the same thing with -- well, the 10 Terry, we know about. So it was only the other 11 studies that were eligible.</p> <p>12 Q These ten studies that you list in 13 Figure 2 are the only studies that you reviewed that 14 discuss regular use of talc, and that's why you 15 included them here; is that right?</p> <p>16 MS. O'DELL: Object to the form.</p> <p>17 A No, that's -- that's not what I said.</p> <p>18 The systematic reviews I read and had 19 data, many of them, on regular use of talc.</p> <p>20 But those were not included in my 21 systematic review because that would have had 22 overlap of -- of -- of patients. So they were not 23 included because it overlapped patients.</p> <p>24 Q (BY MR. ZELLERS) Which studies were those 25 seven?</p>

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<p>1 A So they're listed on page 23 as systematic 2 reviews. So Penninkilampi and Berge and the IARC 3 and Langseth and Huncharek and Gross and Harlow. 4 The reason Terry was pulled out from that 5 to possibly include was because Terry provided new 6 data points that weren't included in the component 7 studies, and so I wanted to make sure not to miss 8 those patients. 9 But these other systematic reviews were 10 all covered in the other primary studies that I 11 included. 12 Q Why did you not include the Cramer study, 13 1999? 14 A Cramer was one of the authors that had a 15 lot of patients that kept appearing in subsequent 16 publications. So he published the same patients 17 more than once, so -- 18 Q What analysis did you do to determine that 19 there was overlap between any of the patients 20 reported on by Cramer in 1999 and any of the ten 21 studies that you did choose to include? 22 A I went through -- I think there's a 23 separate page in my data fields that's just 24 attributed to the Cramer studies -- and wrote down 25 what years of enrollment the patients were.</p>	<p>1 Q (BY MR. ZELLERS) If you turn to -- 2 MS. O'DELL: I'll take that. 3 Q (BY MR. ZELLERS) -- turn to Table 2 on 4 page 353, the bottom table -- at the bottom of the 5 table. 6 A Yes. 7 Q Do you see data with respect to "frequency 8 of use per month"? 9 A Yes. 10 Q That's the type of study and the type of 11 information that you did include in your systematic 12 review; is that right? 13 A Yes. 14 Q Is it fair to say that as you sit here 15 today, you just don't remember why you did not 16 include Cramer 1999? 17 MS. O'DELL: Object to the form. 18 A In looking at this, you have convinced me 19 it's not because he doesn't have frequency of use, 20 because there is frequency of use in here. I do not 21 know why it didn't make it into the final database. 22 But I'm looking at my paper from Cramer 23 from 2016, "The Association Between Talc Use and 24 Ovarian Cancer, a Retrospective Case-control Study." 25 He describes -- this is on page 334 of</p>
<p>1 And to the best I could, I identified the 2 cohorts and then pulled them out to only identify 3 all patients once, which -- which is the reason I 4 hesitated to say there was no overlap. 5 But I did my best to only include every 6 patient once. And -- 7 Q Okay. 8 A -- Cramer got his own worksheet because it 9 was trickier to figure out. 10 Q Cramer 1999 you did not include in your 11 systematic review because you analyzed that paper 12 and the other studies and determined that there was 13 overlap; is that right? 14 A I didn't quite say that. I'm saying that 15 I was very careful not to include overlap patients. 16 I don't know why Cramer 1999 didn't make it into the 17 review. 18 Q I -- 19 A I don't know if he didn't have regular use 20 of talc or -- I -- you know, I would have to -- 21 to figure out why it wasn't included. 22 Q Well, take a look at the Cramer 1999 23 paper, which we'll mark as Exhibit 22. 24 (Exhibit 22 was marked for identification 25 and is attached to the transcript.)</p>	<p>1 that other article -- that data came from three 2 enrollment phases. 3 And my notes on the side say "minus Cramer 4 '99," suggesting -- I don't mind showing you my 5 notes -- showing that there's overlap with Cramer 6 '99 -- 7 Q Okay. 8 A -- so. 9 Q You -- do you believe that the reason you 10 did not include Cramer 1999 is because there was 11 overlap with the patients included in Cramer 2016 or 12 you're not sure? 13 A Yes. 14 MS. O'DELL: Object to the form. 15 Q (BY MR. ZELLERS) Which one is it? 16 MS. O'DELL: Object to the form. 17 A -- I do not know why it wasn't included, 18 but I believe there was overlap with 2016, is why it 19 was not included. 20 Q (BY MR. ZELLERS) You also did not include 21 Rosenblatt 2011 in your systematic review; is that 22 right? 23 A Rosenblatt was included in the review. 24 But on much -- it looks like it didn't make it into 25 the final graph or the final group of ten.</p>

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<p>1 Q Why did it not make it into the final 2 graph or group of ten? 3 A So I don't -- let me just say I don't 4 remember why Rosenblatt was not included. 5 I specifically asked the biostatistician 6 to do the analysis with and without Rosenblatt, and 7 I believe the reason was -- I believe is that -- the 8 quality of Rosenblatt seems very poor, and I can't 9 remember why. 10 But I asked her to do the analysis with 11 and without Rosenblatt. I asked her to do, I think, 12 four different analyses with and without Terry, with 13 and without Rosenblatt.</p> <p>14 <b>My recollection is it had no impact. But</b> 15 I do not remember why I asked her with the quality 16 issue -- I would have to go back to my database to 17 remember why I asked her to do it both ways. 18 Q Rosenblatt contained information over -- 19 or strike that -- including a lifetime number of 20 applications and included information on more than 21 10,000 lifetime applications, correct? 22 A Yes. 23 Q All right. 24 A Well, I -- I'm -- I'm looking for it. 25 Yeah, I'm guessing that --</p>	<p>1 Q -- the difference in result? 2 A It -- it had no impact on the overall -- 3 Q Was -- 4 A -- results. 5 Q -- it exactly the same? 6 A It was within a decimal fraction of a 7 percent the same. 8 Q Can you tell us what the result was with 9 Rosenblatt included? 10 A It was the same with and without 11 Rosenblatt included -- 12 Q Is -- 13 A -- within a hundredth of a percent. 14 Q Did you produce that calculation for us? 15 A Within the files that I shared, it is 16 included in the forest plot tables that Dr. Hall 17 generated. 18 Q Go to Figure 2, if you will, in your 19 report, page 33. Do you have that? 20 MS. O'DELL: If you need to see the -- the 21 data that you produced, Doctor, the Excel 22 spreadsheets -- 23 A Oh, that would be great. 24 MS. O'DELL: -- okay. And I -- I'm going 25 to hand you my computer. But it's --</p>
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<p>1 Q Here is a -- 2 MS. O'DELL: Don't -- don't. Excuse me -- 3 yeah, don't guess. Just if you know. 4 A -- I -- 5 Q (BY MR. ZELLERS) Exhibit 23 is Rosenblatt. 6 A I have got the paper. 7 MS. O'DELL: Yeah. Feel free to take a 8 moment. And if you need your original spreadsheets 9 to answer any of these detailed questions, then we 10 can pull those out for you -- 11 A Okay. 12 MS. O'DELL: -- if counsel does not have a 13 copy for you. 14 Q (BY MR. ZELLERS) Just for the record, 15 Exhibit 23 is Rosenblatt. 16 (Exhibit 23 was marked for identification 17 and is attached to the transcript.) 18 Q (BY MR. ZELLERS) As you sit here, do you 19 know what the difference in results were if 20 Rosenblatt was included in your systematic review or 21 not? 22 A I -- I do. 23 MS. O'DELL: Object to the form. 24 Q (BY MR. ZELLERS) Okay. What is -- 25 A I do.</p>	<p>1 A Can I -- 2 MS. O'DELL: -- it's the data -- 3 A -- this is what I shared with you. 4 MS. O'DELL: -- and that's what she is 5 discussing. 6 Q (BY MR. ZELLERS) Yeah. I have a question 7 pending. If you can answer my -- if you need to 8 look at your counsel's computer to answer my 9 question, you can. 10 But my question is: Will you look at 11 Figure 2 on page 33 of your report. 12 MS. O'DELL: Just hang on. Just -- what 13 I'm showing the doctor is data that -- the tables 14 that she has been discussing, but you have not 15 provided to her, which would be the fair way to 16 examine here on them. 17 But this is the -- the information that 18 was produced to Defendants for purposes of 19 Dr. Smith-Bindman's, you know, deposition. So if 20 you need that, just -- you may refer to it. 21 Q (BY MR. ZELLERS) Are you ready, 22 Dr. Smith-Bindman? 23 A I'm close to ready, but not quite. 24 Q I -- I'm not sure what you are doing. 25 MS. O'DELL: Well, she is looking at the</p>

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<p>1 calculation that you were just asking her about. 2 Q (BY MR. ZELLERS) I have finished those 3 questions. She has answered those questions. I'm 4 asking a new question. Or I would like to. 5 A Okay. Thank you. 6 MS. O'DELL: You're welcome. If you need 7 to see any of the tables -- 8 A Okay. 9 MS. O'DELL: -- Doctor, I have all that 10 has been produced right here. 11 A Fantastic. 12 Q (BY MR. ZELLERS) Okay. 13 Dr. Smith-Bindman -- Bindman, looking at Figure 2, 14 looking at the confidence intervals that you have 15 listed for each of those ten studies, are you aware 16 that not one of those confidence intervals for any 17 of the ten studies are actually listed in or come 18 from the study publications? 19 MS. O'DELL: Object to the form. 20 A I am not aware of that. 21 Q (BY MR. ZELLERS) In fact, did you 22 recalculate the confidence interval for each of 23 these studies? 24 A The confidence intervals and the point 25 estimate are adjusted confidence intervals and odds</p>	<p>1 (Exhibit 24 was marked for identification 2 and is attached to the transcript.) 3 Q (BY MR. ZELLERS) Is this another e-mail 4 exchange between you and Dr. Hall? Is that yes? 5 A I'm so sorry. I didn't hear your 6 question. 7 Q Sure. My question is: Is this an e-mail 8 exchange between you and Dr. Hall? 9 A Yes. 10 Q If you look at the e-mail at the bottom of 11 the second-to-last page, Dr. Hall writes you on 12 Monday, September 24, 2018, at 11:42, and tells you 13 that she is encountering obstacles; is that right? 14 And I'm sorry. It's the third-to-last 15 page is where that e-mail starts. 16 A I see what you are saying. She has a note 17 at the bottom of the page. 18 Q She tells you she's encountering 19 obstacles? 20 A Yes. 21 Q She asks you a number of questions? 22 A Yes. 23 Q No. 1 is that there's missing proportion 24 information and the data is missing. 25 If you go down to 1B, she says, Where the</p>
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<p>1 ratios, so you -- you can't recalculate them from 2 the data in the paper. 3 Q My -- my question is: Who calculated 4 these confidence intervals that appear in Figure 2? 5 Did you calculate those confidence intervals? 6 A To the best of my knowledge, these 7 confidence intervals came from the primary 8 publications. 9 Q And -- and I will represent to you that I 10 have looked at all of the primary publications and 11 the confidence intervals that you have listed in 12 Figure 2. None of those confidence intervals come 13 from the publication. 14 So do you have any idea as to how these 15 confidence intervals were calculated? 16 MS. O'DELL: If there's -- 17 A You would have to show me -- 18 MS. O'DELL: Yes. 19 A -- those -- those disagreements for me to 20 -- 21 Q (BY MR. ZELLERS) Well, let's -- 22 A -- to know what we're looking at. 23 Q -- let's -- I'll get to that in just a 24 second. Let me show you a couple of documents. 25 Deposition Exhibit 24.</p>	<p>1 raw numbers are not available, I would do my best to 2 estimate unless you have access to them and can send 3 them to me. 4 How did you respond to that question? 5 A Can't we see what my answers were? 6 Q Sure. Where are your answers? If you, in 7 any of the documents that have been produced, can 8 show us how you answered these questions, that would 9 be helpful. 10 MS. O'DELL: Object to the form. 11 A I would like to just clarify something in 12 her request, which is she is not asking me in this 13 case for an estimate of the odds ratios or the 14 confidence intervals, even though it seems 15 like she is. 16 What she is asking for is an estimate of 17 the sample size in terms of the N of cases and N of 18 controls that can be used for weighting those 19 studies in generating the summary estimate. 20 So that's where she's trying to fill in 21 the blanks, not for the odds ratios or confidence 22 intervals, but to calculate -- calculate -- 23 calculate how -- how much weight it should be in the 24 summary statistic. 25 Q (BY MR. ZELLERS) How did you respond to</p>

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<p>1 her first question where she advised you that there 2 was missing proportion information and her proposal 3 that "where the raw numbers are not available, I'll 4 do my best to estimate, unless you have access to 5 them and can send them to me"?</p> <p>6 MS. O'DELL: Object to the form; asked and 7 answered.</p> <p>8 A I did not have, other than going to the 9 papers, any additional information to supplement.</p> <p>10 Q (BY MR. ZELLERS) Okay. No. 2 -- 11 MS. O'DELL: Are you finished, Doctor?</p> <p>12 A Say it again.</p> <p>13 MS. O'DELL: Are you finished?</p> <p>14 A No.</p> <p>15 MS. O'DELL: Okay.</p> <p>16 A And so, again, she's not asking me about 17 the abstraction. She's asking me if a study 18 reported, for example, that there were a hundred 19 patients with serous carcinoma or if there were 20 150 patients altogether, it reported the odds ratios 21 for serous carcinoma, but may not have specified in 22 the table how many cases of serous carcinoma there 23 were, could she estimate that proportion when we had 24 the point estimate we needed.</p> <p>25 We had the odds ratio we needed, but she</p>	<p>1 MS. O'DELL: Object to the form. 2 A We discussed this at length, and she ended 3 up going with Option 3, using relative risk as an 4 underestimation of the odds ratios, but 5 approximately equal because of the rareness of the 6 disease.</p> <p>7 Q (BY MR. ZELLERS) So she adopted, at your 8 suggestion, the option that she states, 9 understanding that relative risk may considerably 10 underestimate odds ratios; is that right?</p> <p>11 A Yes, it is.</p> <p>12 Q And you advised her -- for No. 3, how did 13 you advise her when she told you that she was unable 14 to calculate the true -- or truly estimate for any 15 talc use and suggested that you consider pooling the 16 results from rarely, monthly, weekly, and daily?</p> <p>17 MS. O'DELL: Object to the form. Are you 18 talking about No. 3? It's not clear.</p> <p>19 A So the option that we did for that choice 20 is actually neither Option 1 or Option 2.</p> <p>21 The focus of the review that she completed 22 was, in fact, on daily talc use. It's not different 23 than she suggested.</p> <p>24 But she used the numbers that were 25 incorrectly categorized as any talc use instead to</p>
<p>1 needed to know how many serous cancers there were to 2 weight it.</p> <p>3 And I would have told her, when the raw 4 numbers for those missing proportions were not 5 available, to do her best to estimate those.</p> <p>6 Q (BY MR. ZELLERS) Did you respond to this 7 e-mail?</p> <p>8 A I sent you all of the documents that I had 9 for our correspondence.</p> <p>10 Q Okay.</p> <p>11 A I certainly could look again to see if I 12 have an answer to this. Or it could be that we 13 discussed the answers on the telephone.</p> <p>14 Q No. 2 --</p> <p>15 A Let me just see if we have -- if it says. 16 I think we spoke on the telephone.</p> <p>17 Q Do you have any notes of that telephone 18 conversation?</p> <p>19 A No, I don't.</p> <p>20 Q All right. No. 2, when she told you that 21 she was unable to calculate the associated 22 95 percent confidence intervals without the 23 variants, which is not reported and she gave you 24 three options, which option did you tell her to 25 follow, if any?</p>	<p>1 represent daily talc use, so that -- that data point 2 was moved for the daily talc use category.</p> <p>3 Q Let me show you the Chang paper. This is 4 one of the papers that you cite both in Figure 2 and 5 again on Figure 3; is that right?</p> <p>6 A Yes.</p> <p>7 Q All right. Here's the Chang paper which 8 we have marked as Exhibit 25.</p> <p>9 A Oh.</p> <p>10 (Exhibit 25 was marked for identification 11 and is attached to the transcript.)</p> <p>12 Q (BY MR. ZELLERS) Do you have that in front 13 of you?</p> <p>14 A I do.</p> <p>15 Q Okay. Show us -- you see in Figure 2, 16 that Chang is listed twice, and it has a confidence 17 interval of .51 to 1.39.</p> <p>18 Do you see that?</p> <p>19 A You said it's listed twice?</p> <p>20 Q I'm sorry. It was -- it's listed in 21 Figure 2 and then you list it again in Figure 3; is 22 that right?</p> <p>23 A Yes.</p> <p>24 Q All right. The first question is: Where 25 in the Chang publication do you get a confidence</p>

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<p>1      interval of .51 to 1.39?</p> <p>2      A    Hum? So the point estimate that I 3      think -- I need to look at the paper a little more 4      closely.</p> <p>5      So the number I see in this paper is 6      instead of being .51 to 1.39 is .61 to 1.49 is about 7      ten points higher.</p> <p>8      Q    All right. You don't know where, for 9      Figure 2, the confidence interval of .51 to 1.39 10     came from, correct?</p> <p>11     A    I -- I do not. It's so close to the 12     publication -- the publication that I'm not sure if 13     it reflects a data abstraction error or if it was -- 14     I think that's probably what it -- what it does, but 15     I'm not sure.</p> <p>16     Q    The Chang paper involved 450 patients with 17     borderline and invasive ovarian carcinoma; is that 18     right?</p> <p>19     A    Say it one more time for me.</p> <p>20     Q    Sure. The Chang paper --</p> <p>21     A    Yeah.</p> <p>22     Q    -- Exhibit 25, involved a total of 23     450 patients with borderline and invasive ovarian 24     carcinoma; is that right?</p> <p>25     A    Yes.</p>	<p>1      notes here, but I believe what I did for Chang is 2      that Chang's numbers are included in the Terry 3      report where she used the data that were published, 4      as well as the supplemental data that were provided 5      by Chang.</p> <p>6      And within the supplemental data, Terry 7      did a stratified analysis that provided additional 8      information on serous cancer that was not actually 9      in the original Chang report.</p> <p>10     And those are the data that made it into 11     what is under Chang in this systematic review.</p> <p>12     Q    (BY MR. ZELLERS) Okay.</p> <p>13     A    So they're data from Chang's work and 14     following Chang's methods. They happen not to be 15     published in Chang's original report, but rather 16     included in the Terry report from -- from 2013.</p> <p>17     And Terry -- the paper that I am talking 18     about for Terry is genital powder use and risk of 19     ovarian cancer, a pooled analysis of 8,500 cases and 20     ninety-eight hundred fifty-nine controls.</p> <p>21     And then within that describes within the 22     methods, getting extra data for studies describing 23     the regular use and then breaking down the results 24     into whether or not it was invasive borderline, 25     invasive serous, and so forth --</p>
<p style="text-align: center;">Page 191</p> <p>1      Q    You used or Dr. Hall used, in your 2      analysis, only 41 of those 450 patients because 3      those are the only ones that had greater than 4      25 times of use per month, correct?</p> <p>5      A    So I would need to look at my datasheet to 6      know how many made it into the analysis, but I 7      believe you're correct, that there were 8      approximately 10 percent that were frequent users.</p> <p>9      Q    How did you determine, just looking at the 10     Chang paper, how many of those 41 had invasive 11     serous ovarian cancer?</p> <p>12     MS. O'DELL: If you need to look at your 13     datasheets --</p> <p>14     A    Please.</p> <p>15     MS. O'DELL: Which --</p> <p>16     A    That would be great.</p> <p>17     MS. O'DELL: -- which data -- tell -- data 18     summary, is that what --</p> <p>19     A    Yeah --</p> <p>20     MS. O'DELL: -- you are --</p> <p>21     A    -- that should be it.</p> <p>22     MS. O'DELL: Okay. This is both --</p> <p>23     both -- both of the spreadsheets are there, so just 24     --</p> <p>25     A    Okay. So I don't have all of my detailed</p>	<p style="text-align: center;">Page 193</p> <p>1      Q    So --</p> <p>2      A    -- so that's where those numbers came 3      from.</p> <p>4      Q    You believe that if I looked at the Terry 5      paper, I would be able to tell of these 41 cases 6      that have greater than 25 uses per month, which of 7      those cases involved invasive serous ovarian cancer, 8      correct?</p> <p>9      MS. O'DELL: Object to the form.</p> <p>10     A    I believe the -- I believe the number of 11     cases is specified in the Terry paper that I would 12     have to look at to find that -- that number.</p> <p>13     Q    (BY MR. ZELLERS) All right. Let me ask 14     you a few questions.</p> <p>15     A    Yes.</p> <p>16     Q    In the Chang paper --</p> <p>17     A    Yes.</p> <p>18     Q    -- the authors do not define "regular use" 19     as daily, do they?</p> <p>20     A    What Chang says in the original 21     publication is questions about regular talc use and 22     type of talc use, as well as duration and frequency 23     could be derived or included; dusting or powdering 24     behavior considered improved regular application of 25     talc to the perineum after showering or bathing and</p>

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<p>1 dusting. 2 And then that was categorized, I believe 3 by Terry, as regular use when she got supplemental 4 data. 5 Q Okay. In the Chang paper, the authors do 6 not define "regular use" as daily use, correct? 7 MS. O'DELL: Object to the form; asked and 8 answered. 9 A The Chang paper explicitly says "regular 10 use." In the original publication, they don't 11 define it. 12 Q (BY MR. ZELLERS) They do not include 13 information in the Chang paper about how many times 14 per week women used talcum powder, correct? 15 MS. O'DELL: Object to the form. 16 A In -- in Table 2 of Chang, they define it 17 as less than ten, ten to 25, or greater than 25 18 times per week. 19 Q (BY MR. ZELLERS) Where do you see that? 20 A In Chang? 21 Q Yes. I'm looking at the same table, and I 22 think it's per month. 23 A Per month. 24 Q Okay. And that's the only data that's 25 provided with respect to use is the number of</p>	<p>1 of invasive besides just serous. 2 Q Do you know that? 3 A I -- I don't think they specify what's 4 included in that. I have to add up the total to see 5 if they are overlapping or not overlapping. 6 Could you add -- could you add that for 7 me? Actually, the total should be -- they're 8 overlapping. 360, 460. Yeah, they're overlapping. 9 Yeah. 10 Q What do you mean, "they're overlapping"? 11 A Invasive and borderline should add up to 12 the total. 13 And then serous mucin -- mucinous and 14 endometrioid should add up to the total, except to 15 the degree that they are missing information. 16 Q Looking at the questions that Dr. Hall 17 asked you -- 18 A Yes. 19 Q -- in Exhibit 24, you would agree that 20 there were number of assumptions that you and she 21 made in order to complete your systematic review; is 22 that right? 23 A Absolutely. 24 Q Is there anywhere that you have written 25 down, you know, what the assumptions were that you</p>
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<p>1 monthly applications, correct? 2 A Yes. 3 Q The authors of Chang did not arrive at a 4 specific odds ratio for serous invasive cancer based 5 on frequency of use, correct? 6 A The Chang data was used by Terry to 7 calculate frequency of use for serous and invasive 8 by supplementing the original data that they had 9 from additional data from Chang as a participant in 10 the OCAC consortium. 11 So additional data from that study was 12 shared with Terry, which is what we used in our 13 analysis. 14 Q If we look at Chang in Table 3, they 15 describe a histologic type of invasive; is that 16 right, in Table 3, page 2399? 17 A Yes. 18 Q They also describe serous; is that right? 19 A Yes. 20 Q In the Chang data, what's the difference 21 between invasive and serous? 22 A I'm -- I'm sorry. In lot -- in Table 3 23 you're asking what those different entries mean? 24 Q Yes. 25 A "Invasive" presumably includes other types</p>	<p>1 and Dr. Hall arrived at, at least in part in 2 response to her questions? 3 A So for some of the issues, it took me 4 quite a bit of remembering to remember that we used 5 some of the extracted data from more than one 6 source. 7 We have notes in our data form of what the 8 source of the data was, so it would say in some of 9 the data I said -- under Chang, it would say "in a 10 column from Terry." 11 Q My question -- 12 A So that -- that -- so to answer the 13 assumption of where the data came from, it's in my 14 data spreadsheet. I just -- I just didn't remember 15 that we pulled data. 16 Q My -- my question is a little different I 17 -- 18 A Okay. 19 Q -- think. In terms of all of the 20 questions that Dr. Hall asked you and all of the 21 assumptions that would need to be made so that 22 estimates could be arrived at, do you have either 23 your protocol or a listing of the assumptions that 24 were made by you and by Dr. Hall in -- at least in 25 part in response to the question she raised?</p>

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<p>1            MS. O'DELL: Objection, asked and 2        answered. Respond. 3            A I am under the impression that they're 4        documented within our e-mail exchanges, but I do not 5        have a protocol with each of these decisions that 6        are laid out. 7            Q (BY MR. ZELLERS) I -- my best source would 8        be the e-mail exchanges that you had with Dr. Hall, 9        correct? 10          MS. O'DELL: Object to the form. 11          Q (BY MR. ZELLERS) Is that right? 12          A Yes. 13          Q Okay. Once you did your ten studies that 14        are in Figure 2 -- and those were just the -- 15        the studies that you chose to include, as you have 16        told us, showing odds of ovarian cancer associated 17        with regular use of talcum powder -- you further 18        refined the studies or narrowed down the studies to 19        four which you state plot or who the odds of ovarian 20        cancer associated with regular use of talcum powder 21        and invasive serous cancer; is that right? 22          MS. O'DELL: Object to the form. 23          A With the caveat that when -- when I laid 24        out our stratified analysis on page 32, it says, My 25        review focused on invasive serous cancer where</p>	<p>1        confidence interval for the -- let's say the Chang 2        data that you list in Figure 3? 3            A I'm going to have to look into the exact 4        calculation of the confidence interval. 5            The question that you asked me about Chang 6        for the first table is very close to the one that's 7        published -- so close -- that I'm not sure how it 8        would be different. 9            I don't -- I thought these were abstracted 10       from the paper. And I would have to go back and 11       talk to Dr. Hall about how they were calculated. 12          I thought they were calculated, but I -- I 13        may be -- I may be wrong. They may have been in 14        some way reestimated. 15          So again, similar with this, these numbers 16        are close to the ones that are in this paper, but 17        are slightly off, and I'm not sure why. 18          So I would have to go back to the data 19        that I abstracted and then the data that she sent me 20        back for the final tables to see why they were 21        different. 22          Q Okay. 23          A But they're -- they're different to a -- 24        such a slight degree that -- and I'm not really sure 25        where that difference came from.</p>
<p>1        possible, but also included all invasive cancer. 2          Q (BY MR. ZELLERS) What did you do to get 3        from the ten studies that you list in Figure 2 to 4        the four studies that you list in Figure 3? 5          A Figure 2 is ovarian cancer with regular 6        use, and Figure 3 is invasive serous cancer. 7          If there was not invasive serous but there 8        was just invasive, they also might be in this. I 9        would have to review these four studies to know if 10       it was invasive or invasive serous. 11          Q Do you know, as you sit here, what you did 12        to go from the ten studies in Figure 2 to the four 13        studies in Figure 3? 14          MS. O'DELL: Object to the form. 15          A In the data set that I sent to you and 16        sent to Dr. Hall, they would -- there were different 17        sets of complete data. And the Figure 3 had data 18        for invasive or invasive serous cancer; whereas, 19        Figure 2 had -- included invasive and noninvasive. 20          So it would just be where there were data 21        available in the data worksheet. I -- I was not 22        involved in making the selection to go from one to 23        the other. It was just where there were data that 24        were abstracted from the papers. 25          Q (BY MR. ZELLERS) Where did you get the</p>	<p>1        Q Were there any other analyses that you or 2        Dr. Hall con -- conducted that are not included in 3        your report? 4          A I had asked Dr. Hall, I believe, to look 5        at -- at several analyses that are all in the data 6        that I shared with you. 7          The sensitivity analysis for Terry and the 8        sensitivity analysis for the Rosen [sic] study are 9        in the data I sent you, but are not summarized in 10       the report. 11          MS. O'DELL: And by "the data," you're 12        talking about the spreadsheets -- 13          A Yes. 14          MS. O'DELL: -- that you provided? 15          A Yes. There -- there are more analyses 16        that were done that you haven't seen. But they -- 17        they were analysis for four analyses. 18          I just see two here. So I -- there were 19        two others. I think it was including Terry and 20        including Rosenblatt, I think, are the other two. 21          But you have all of the -- there were no 22        other analyses except those four that she completed. 23          MS. O'DELL: Excuse me, Mike. I'm sorry. 24        We're right at 3:00 p.m. When you get to a stopping 25        point, can we take a break?</p>

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<p>1           MR. ZELLERS: All right. Let's stop. 2   We're stopping for the day; is that right? 3           MS. O'DELL: Let's -- let me speak with 4   Dr. Smith-Bindman on the break and then I'll let you 5   know. 6           MR. ZELLERS: All right. 7           THE VIDEOGRAPHER: We're off the record at 8 2:59 p.m. 9           (A break was taken from 2:59 p.m. to 10 3:11 p.m.) 11          THE VIDEOGRAPHER: We are back on the 12 record. This marks the beginning of Disc No. 4 in 13 the deposition of Dr. Rebecca Smith-Bindman. The 14 time is 3:11 p.m. 15          Q (BY MR. ZELLERS) Dr. Smith-Bindman, what 16 methodology, if anything different, did you use to 17 arrive at your opinion that there was a causal 18 association between genital talcum powder use and 19 ovarian cancer? 20          A I used the Bradford Hill criteria. 21          Q Are you familiar with the Bradford Hill 22 criteria? 23          A I am. Yes, I am. 24          Q You're familiar that over time the FDA has 25 gone through and done various analyses with respect</p>	<p>1           Q The FDA, in 2014, reviewed the 2 epidemiology and etiology findings relating to 3 ovarian cancer and the genital application of talc; 4 is that right? 5           MS. O'DELL: Object to the form. 6          A Yes. 7          Q (BY MR. ZELLERS) The FDA noted that 8 selection bias and/or uncontrolled confounding 9 result in spurious positive associations between 10 talc use and ovarian cancer; is that right? 11          MS. O'DELL: Object to the form. 12          A The FDA concluded that some of the studies 13 had biases. Yes, they did. 14          Q (BY MR. ZELLERS) And if we look at No. 2, 15 the FDA states, No single study has considered all 16 the factors that potentially contribute to ovarian 17 cancer, including selection biased and/or 18 uncontrolled confounding that result in spurious 19 positive associations between talc use and ovarian 20 cancer risk. 21          Is that right? 22          A That is what the FDA concluded. 23          Q The FDA also noted that there was a lack 24 of consistency in the study results; is that right? 25          A That is what the FDA concluded.</p>
<p style="text-align: center;">Page 203</p> <p>1 to perineal talcum powder use and any association 2 with ovarian cancer; is that right? 3           MS. O'DELL: Object to the form. 4          A I -- I have seen some documents by the 5 FDA. 6          Q (BY MR. ZELLERS) And the FDA, back in 7 2014, did a review and analysis of the epidemiology 8 at that time; is that right? 9           MS. O'DELL: Object to the form. 10          A Could you show me that document? 11          Q (BY MR. ZELLERS) Sure. This is a document 12 that we'll mark as Exhibit 26. 13          (Exhibit 26 was marked for identification 14 and is attached to the transcript.) 15          Q (BY MR. ZELLERS) It's a document from the 16 FDA. It's got a date stamp at the top -- 17          MS. O'DELL: Thank you. 18          Q (BY MR. ZELLERS) -- April 1 of 2014. 19          Is this one of the documents that you have 20 reviewed in connection with your expert work in this 21 matter? 22          A Yes, it is. 23          Q Turn, if you will, to page 4 of that 24 document. Do you see that? 25          A Yes.</p>	<p style="text-align: center;">Page 205</p> <p>1           Q And specifically the FDA concludes, 2 Results of case-control studies do not demonstrate a 3 consistent, positive association across studies; is 4 that right? 5           MS. O'DELL: I think it says something 6 further than that. 7          A Can I just add something? This -- the FDA 8 did some review that I don't know the details of. 9 And this is their summary of that review, which I 10 don't know the details of, yes. 11          Q (BY MR. ZELLERS) The FDA, at least in this 12 review, stated that dose response evidence is 13 lacking; is that right? 14          And I am looking at the end of Point No. 3 15 on page 4. 16          A That is what the FDA concluded. 17          Q And looking at Point No. 4, the FDA found 18 that a cogent biological mechanism was lacking; is 19 that right? 20          A That is what the FDA concluded. 21          Q You have reviewed IARC; is that right? 22          And I think in your blue folder here you have 23 included some IARC documents? 24          A I have included IARC work reflecting 25 analysis through 2006 and then more recently</p>

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<p>1 through -- through 2010, each published a few years 2 after that. 3 Q IARC has gone through and addressed the 4 Bradford Hill considerations with respect to the 5 classification of genital talc; is that right? 6 MS. O'DELL: Object to the form. 7 A Can you remind me which analysis you're 8 referring to? 9 Q (BY MR. ZELLERS) Well, let's start with 10 the classifications. Take a look at Exhibit 27, if 11 you will. 12 (Exhibit 27 was marked for identification 13 and is attached to the transcript.) 14 Q (BY MR. ZELLERS) Are these the IARC 15 classifications for its determination -- 16 MS. O'DELL: Thank you. 17 Q (BY MR. ZELLERS) -- as to the 18 carcinogenicity -- carcinogenicity of different 19 agents? 20 A Yes. 21 Q And you're generally familiar with these 22 classifications; is that right? 23 A I am. 24 Q Group 1, these are the agents that IARC 25 has determined are carcinogenic to humans, correct?</p>	<p>1 prove that something is safe is -- is next to 2 impossible -- 3 Q (BY MR. ZELLERS) Right. 4 A -- and so that's why that category is 5 not -- is used. Category 3 and four can, for the 6 sake of discussion, be considered the same. 7 Q And that's why there's no Group 5, not 8 carcinogenic; is that right? 9 A Yes. 10 Q Correct? Now, with genital talc, IARC has 11 determined that it is appropriately placed in the 12 "to be" category; is that right? 13 MS. O'DELL: Object to the form. 14 A I -- I would take a slight pause to that 15 consideration. I think that in the first review 16 when they have looked at platy talc, they consider 17 it a "to be" possibly carcinogenic to humans. 18 Whereas, in the report looking at asbestos 19 and fibrous talc, which also counts in the same 20 category as asbestos, the -- that is in the category 21 that's a Group 1 carcinogenic to humans. 22 Q (BY MR. ZELLERS) IARC has determined that 23 genital talc is a group to be possibly carcinogenic 24 to humans; is that right? 25 MS. O'DELL: Object to the form.</p>
<p style="text-align: center;">Page 207</p> <p>1 A Yes. 2 Q And that's the only category in which IARC 3 finds sufficient evidence in humans; is that right? 4 MS. O'DELL: Object to the form. 5 A That's how they define that category. 6 Q (BY MR. ZELLERS) IARC puts 82 agents in 7 Group 2A probably carcinogenic to humans; is that 8 right? 9 A That is correct. 10 Q So IARC has gone through and has evaluated 11 many, many, many agents and has determined that 12 there are over 200 agents in both the Group 1 13 category and also the Group 2A category, correct? 14 A Yes. 15 Q There's only one agent in Group 4, 16 probably not carcinogenic to humans; is that right? 17 MS. O'DELL: Object to the form. 18 A Yes, that's correct. 19 Q (BY MR. ZELLERS) So out of the over a 20 thousand agents that IARC has reviewed, it's only 21 placed one agent in Group 4 probably not 22 carcinogenic; is that right? 23 MS. O'DELL: Object to the form. 24 A To be considered by IARC, there has to be 25 data to suggest there's some potential harm. And to</p>	<p style="text-align: center;">Page 209</p> <p>1 Misstates her testimony. 2 A So in their initial review -- in their 3 earlier review, they concluded that genital talc is 4 possibly carcinogenic to humans. 5 In the more recent 2012, they discuss that 6 cosmetics are the primary sources of exposure to 7 talc in the general population; that perineal 8 application is the primary route and that fibrous 9 talc, which is part of talc, is actually Group 1 10 carcinogenic. 11 Q (BY MR. ZELLERS) All right. Show me the 12 IARC designation of genital talc as a Group 1 13 carcinogenic. 14 MS. O'DELL: Object to the form. 15 A Genital talc contains platy talc, as well 16 as fibrous talc, as well as asbestos-contaminated 17 talc, and they consider any fibrous talc to be a 18 Group 1 carcinogen. 19 Q (BY MR. ZELLERS) Show me where the 20 perineal application of genital talc has been 21 determined by IARC to be a Group 1 carcinogen. 22 MS. O'DELL: Object to the form. Would 23 you like to see the IARC? 24 A Can you show me the IARC report? 25 Q (BY MR. ZELLERS) No. I would like you --</p>

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<p>1 you're the one who is testifying. 2 A I just don't have the document in front of 3 me. How would you like me to show it to you? 4 Q I -- I would like you to show me where 5 genital talc has been found by IARC to be a Group 1 6 carcinogen. 7 MS. O'DELL: Object to the form. So was 8 that not -- excuse me, Doctor. Is that not 9 something you're going to put in front of her? 10 Q (BY MR. ZELLERS) I -- I have my 11 information. And my IARC review says that they have 12 classified genital talc as a group to be possibly 13 carcinogenic to humans. 14 A Do you have the 2012 -- 15 MS. O'DELL: Yes. Let me just get it for 16 you, Doctor. Give me a moment to see what number it 17 is in your references. 18 Q (BY MR. ZELLERS) As your counsel is 19 looking for that document, can we agree that the "to 20 be" designation with IARC is based on limited 21 evidence in humans, which means IARC cannot rule out 22 chance, bias, or confounding with reasonable 23 confidence? 24 A In their original assessment of talc in 25 2010 where they classified it as to be, the "to be"</p>	<p>1 A So this is the monograph -- the 2 monograph -- the IARC monograph on the evaluation of 3 carcinogenic risks -- arsenic metals, fibrous and 4 dust, volume 100C. So -- 5 Q I'm looking for perineal talc. 6 A No. No. I know. I understand. 7 Q Okay. 8 A I'm just telling you where I'm -- I'm 9 going to be pulling this from. And I'm looking at 10 the section under "Asbestos." And under the Pier -- 11 the -- the section under "Asbestos, it talks, under 12 1.C -- 13 Q What page? 14 A -- 230. And I will read several sections 15 of it. This section says, Talc particles are 16 normally plate-like. These particles are viewed on 17 edge under the microscope. 18 THE COURT REPORTER: I have to have you 19 slow down when you read. 20 A I'm so sorry. May appear to be fibers. 21 Talc may also form true mineral fibers that are 22 asbestosiform in habit. 23 In some talc deposits, tremolite, 24 anthophyllite, and actinolite may occur. Talc 25 containing asbestosiform fibers is a term that has</p>
<p>1 designation means that it's possibly carcinogenic, 2 which is a very high bar for them to put them in 3 that category, but could also be due to chance. 4 Q Okay. Also, in class "to be" as possibly 5 carcinogenic is ginkgo biloba; is that right? 6 A I -- I have no idea. 7 Q Occupational carpentry and joinery; is 8 that right? 9 A I -- I have no idea. 10 Q Pickled -- 11 A I -- 12 Q -- vegetables? 13 A -- I think pickled vegetables are pretty 14 carcinogenic, but I -- I don't know what IARC thinks 15 of them. 16 Q Do you believe that the standard for 17 prove -- proving causation in the scientific 18 literature is the same as the one that applies in 19 litigation? 20 A Yes, I do. 21 Q Do you want to show me what your counsel 22 has provided you? 23 A Yes. 24 Q And I am looking for the finding that IARC 25 that genital talc use is a Group 1 carcinogen.</p>	<p>1 been used inconsistently. 2 I'm -- I'm just seeing where the -- 3 Q (BY MR. ZELLERS) That's okay. And I am 4 looking for the statement or the finding that 5 genital talc -- cosmetic genital talc has been 6 determined by IARC to be a Group 1 carcinogen. 7 A So I'm in the section -- 8 MS. O'DELL: Object to the form. 9 A -- on the talc and asbestosiform talc. And 10 under 1.65, "Human Exposure," under "A," it says, 11 Exposure of the general population: Consumer 12 products, cosmetics, pharmaceuticals are the primary 13 source of exposure to talc for the general 14 population. Inhalation and dermal contact through 15 perineal application are the primary routes of 16 exposure. 17 Q (BY MR. ZELLERS) Where does IARC conclude 18 that perineal talc use, cosmetic talc, is a Group 1 19 carcinogen? 20 MS. O'DELL: Object to the form. 21 A As late as 1973, talc products contained 22 detectable levels of chrysotile asbestos, tremolite, 23 or anthophyllite role. And it's possible they 24 remained on the market in some places for some time 25 after that. And these are asbestosiform in habit.</p>

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<p>1        It goes on to cite a whole lot of other 2        places, Blount and so forth. 3        And then in this same document they 4        categorize the asbestos and asbestiform fibers as 5        being a Group 1 carcinogen. 6        Q (BY MR. ZELLERS) I'm going to ask you 7        about asbestos and I'm going to ask you about 8        asbestiform fibers. 9        What I want to know is: Where does IARC, 10      in the publication you're looking at, categorize 11      cosmetic talc applied perineal -- to the perineal 12      region as a Group 1 carcinogen? 13      MS. O'DELL: Object to the form. 14      A They're telling us in this document that 15      asbestos and asbestiform talc are Group 1 16      carcinogens. 17      They're telling us at the cite -- the -- 18      the most common exposure is consumer products. And 19      inhalation and dermal contact with perineal 20      application of talc powders are the primary routes 21      of exposure. 22      Q (BY MR. ZELLERS) Where does IARC state 23      that perineal use of cosmetic talc is a Group 1 24      carcinogen? 25      MS. O'DELL: Object to the form.</p>	<p>1        MS. O'DELL: As I'm not coaching the 2        witness. So you can ask the questions, but you 3        can't raise your voice and -- and continue -- 4        MR. ZELLERS: We have a video record. 5        MS. O'DELL: -- yes, we do. 6        MR. ZELLERS: No one here would say that 7        I'm raising my voice to the witness or behaving in 8        any way other than professionally. 9        A I'm looking for the executive summary. 10      It's just taking a while in this very large document 11      to -- I see the problem. 12      The copy of this document, I'm missing my 13      first few pages. 14      Q (BY MR. ZELLERS) Okay. 15      A It starts at 30 -- 31. 16      THE COURT REPORTER: Did you say "few" or 17      "first three"? 18      A I think I'm missing the first 30 pages. 19      Q (BY MR. ZELLERS) All right. Let -- 20      A So -- 21      Q -- me move on then. 22      A -- okay. 23      Q Strength of association is a Bradford Hill 24      criteria -- is that -- criterion; is that right? 25      A Yes, it is.</p>
<p>1        A So IARC is telling us which compounds are 2        Group 1 carcinogens. 3        Q (BY MR. ZELLERS) Where does it state that 4        the perineal use of cosmetic talc is a Group 1 5        carcinogen? 6        MS. O'DELL: Object to the form. She has 7        already stated that three times. 8        MR. ZELLERS: Well, I haven't heard it 9        yet -- 10      MS. O'DELL: Yes. 11      MR. ZELLERS: -- Counsel. 12      MS. O'DELL: Yes, you -- she has described 13      it to you three times or four times maybe. And so 14      she has -- 15      MR. ZELLERS: Counsel -- 16      MS. O'DELL: -- answered your question. 17      MR. ZELLERS: -- please don't coach the 18      witness. Just -- 19      MS. O'DELL: -- I'm not -- I'm not -- 20      MR. ZELLERS: -- object to form, if you 21      want to object to form. 22      MS. O'DELL: -- well, don't harass the 23      witness, which -- that's what I am -- 24      MR. ZELLERS: I'm not harassing the 25      witness.</p>	<p>1        Q You -- one of the studies you reviewed was 2        Langseth; is that right? 3        A Yes, it is. 4        Q Langseth reviewed the overall pooled odds 5        of cancer and found that there was an odds ratio of 6        1.35 across the studies; is that right? 7        A I'm going to look for it, but -- 8        Q Okay. I -- 9        A -- it sounds about right. 10      Q -- I will hand you Langseth. 11      A I have it. 12      Q If you take a look at page 359, 13      Figure 1 -- do you see that -- do you know Langseth? 14      A I do. 15      Q Langseth looks at the case-control 16      studies, both the population-based and the 17      hospital-based; is that right? 18      A He looked at the studies that had a -- he 19      had available when this was established a decade 20      ago, yes. 21      Q And -- and he lists out 20 case-control 22      studies, correct? 23      A 14? 24      Q I'm looking at the chart above Figure 1. 25      And you think there's only 14 studies there?</p>

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<p>1 A Oh, I apologize. I thought you were 2 talking about the population-based studies. 3 No. You're absolutely right. 20 studies. 4 Q And of those 20 studies, only ten have 5 statistical significance; is that right? 6 A The original studies with the sample size 7 they had, ten seemed to have difference than one. 8 Q Of the 20 studies -- the 20 case-control 9 studies that were available and were studied by 10 Langseth, only ten had statistically significant 11 results; is that right? 12 MS. O'DELL: Object to the form. 13 A Again, he is combining them together. But 14 in the original form when they were not combined, 15 there are ten in their original form that had 16 statistical differences than one. They could 17 exclude one. 18 Q (BY MR. ZELLERS) Half of the studies did 19 not have statistically significant results; is that 20 right? 21 A The original studies had wide confidence 22 intervals. And the original studies, before they 23 were combined, many of them overlapped one. 24 Q Is the answer yes to my question? 25 MS. O'DELL: She has answered your</p>	<p>1 a causal association between perineal use of talc 2 and ovarian cancer? 3 MS. O'DELL: Objection to form. 4 A The Langseth study is one review. And as 5 I describe in my report, it seems like a well-done 6 review, although it does not provide the kind of 7 details that I would hope it would provide given 8 sort of the stature of some of the people who were 9 involved in writing the report. 10 That being said, this systematic review 11 suggests that there's an association between 12 perineal talc exposure and ovarian cancer. 13 Q You -- 14 A By itself, I don't think it provides 15 enough data to have causality, but it provides good 16 evidence that there's an association. 17 Q You understand that your interpretation of 18 this study is different and broader than the 19 authors' interpretation of the data, correct? 20 MS. O'DELL: Object to the form. 21 A One of the author's conclusion that I 22 found quite compelling was in -- on page 358 in the 23 second paragraph -- in the second column -- 24 Q (BY MR. ZELLERS) Can you answer my 25 question?</p>
<p>1 question. 2 MR. ZELLERS: Well, I -- I don't know. I 3 haven't heard an answer. 4 MS. O'DELL: You have heard a complete 5 answer. 6 A You're asking me to look at the results in 7 Figure 1 -- 8 Q (BY MR. ZELLERS) Yes. 9 A -- which are meant to combine results. 10 But they also had the individual original study 11 sample size and show that about half of them overlap 12 one. 13 Q Half is no better than a coin toss, 14 correct? 15 MS. O'DELL: Object to the form. 16 A It's an interesting question. But if 17 you're looking for something, is there an 18 association with an exposure with cancer, a random 19 selection of that, you would expect to find very few 20 positive associations. 21 To find half is an enormous association to 22 find from random studies if there was no 23 association. 24 Q (BY MR. ZELLERS) Do you believe that based 25 upon the Langseth paper and analysis, that there is</p>	<p>1 MS. O'DELL: She has answered your 2 question. Don't -- 3 MR. ZELLERS: Well, I don't think she is 4 answering my question. 5 A I think you are asking me about what the 6 authors conclude. 7 Q (BY MR. ZELLERS) I asked if your 8 conclusion was broader than the authors' -- 9 MS. O'DELL: And she is telling you what 10 the authors' conclusions are. You may finish, 11 Doctor. 12 A What -- what Langseth says is that, Eight 13 of the population-based case-control studies were 14 identified by the Arforthinger (phonetic) as being 15 the most informative in terms of the size of the 16 studies, whether the studies were population-based 17 participation rates and adjustment for confounding 18 variables. These selected studies -- among these 19 eight studies, the prevalence of use of talc was 16 20 to -- 21 THE COURT REPORTER: I can't hear. 22 A -- sorry. The selected studies included 23 at least 188 cases and had participation rates 24 ranging up to 75 percent. Among these eight 25 studies, the prevalence of peritoneal use of</p>

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<p>1 talc-based body powder among controls ranged from 16 2 to 52 percent. 3       The relative risk of ovarian cancer among 4 body powder users were homogeneous across the set of 5 eight studies, each of which indicated a 30 to 6 60 percent increase in risk. 7       Among the other 12 case-control studies, 8 most also reported relative risk of this magnitude 9 or higher. 10      So I think the authors of this concluded 11 that the better studies showed a very strong 12 association. And -- and I -- I'm not sure what 13 conclusion of the authors you're asking me to 14 disagree with. 15      Q (BY MR. ZELLERS) Okay. Doctor, take a 16 look at "Proposal to Research Community" on the 17 right-hand side of page 359. 18      Do you see that? 19      A I do. 20      Q I'm going to read this, and you tell me if 21 I read it correctly. 22      "The current body of experimental and 23 epidemiological evidence is insufficient to 24 establish a causal association between perineal use 25 of talc and ovarian cancer risk.</p>	<p>1 as nonresponsive. 2       My question was: Did I read that 3 correctly? 4       A You read that text correctly. 5       Q All right. You conclude in your report 6 with respect to strength of association that because 7 a very large number of ovarian cancers are caused by 8 talcum powder and talcum powder provides no 9 better -- no medical benefit, the Hill criterion of 10 strength of association is important and met. 11      Is that right? 12      A I don't think that's exactly right. I -- 13 I think all of the things I believe are in there 14 somewhere, but that's not quite what I would be -- 15      Q I -- 16      A -- report. 17      Q -- I'm just reading from page 38 of your 18 report. Do you believe that because a very large 19 number of ovarian cancers are caused by talcum 20 powder and talcum powder provides no medical 21 benefit, the Hill criterion of strength of 22 association is important and is met? 23      MS. O'DELL: Object to the form. I don't 24 think you read that -- 25      A I --</p>
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<p>1       Experimental research is needed to better 2 characterize deposition, retention, and clearance of 3 talc to evaluate the ovarian carcinogenicity of 4 talc." 5       Did I read that correctly? 6       A Not only did you read that correctly, I 7 would agree with that based on data available in 8 2008. 9       So you asked me if I thought this study by 10 itself evaluated causality. 11      And this study did not discuss the 12 deposition, the retention, or clearance. And I 13 think those factors are crucial to understanding the 14 causality. 15      Q Okay. 16      A And that's new since -- 17      MR. ZELLERS: Move -- 18      A -- 2008. 19      MR. ZELLERS: -- to strike as not -- 20      MS. O'DELL: She is -- 21      MR. ZELLERS: -- she finished. 22      MS. O'DELL: -- she did not finish. 23      MR. ZELLERS: Did you finish? 24      A I was close enough. 25      MR. ZELLERS: All right. Move to strike</p>	<p>1       MS. O'DELL: -- the report correctly. But 2 if you were intending to read from her report 3 verbatim, I don't believe that was correct. 4       MR. ZELLERS: Counsel, please, just object 5 to form, if you do have an objection. 6       MS. O'DELL: I have an objection. 7       A Could you -- again, you -- the -- what I 8 believe has been -- within your statement, but 9 that's not the reason I believe that the Bradford 10 Hill criteria are met. 11      Q (BY MR. ZELLERS) Well, let me ask you a 12 question. 13      A Yes. 14      Q In your discussion of the Bradford Hill 15 criterion of strength of association, you include 16 Table 7, which is entitled "An Estimate of the 17 Number of Ovarian Cancers and Invasive Serous 18 Cancers Caused by Regular Use of Perineal Talc 19 Powder Products"; is that right? 20      A Yes. 21      Q Is that a calculation that you did to try 22 to determine whether or not there is strength of 23 association? 24      A No, but that's not why I included that. 25      Q Well, is it included in your "Strength of</p>

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<p>1      Association" section?</p> <p>2      A It is included in the strength of</p> <p>3      association to demonstrate how -- an odds ratio of</p> <p>4      1.5, how many patients could be impacted on that.</p> <p>5      So one of the questions is: Is there a</p> <p>6      strong association? And the second, which is really</p> <p>7      quite a different question, is: What's the</p> <p>8      magnitude of that association?</p> <p>9      And sometimes the magnitude of the</p> <p>10     association is mistakenly used as an approximation</p> <p>11     of the strength of the association.</p> <p>12     And I was trying to disentangle the</p> <p>13     strength of the association. How truly do we know</p> <p>14     they're associated with -- if it is associated, how</p> <p>15     big of an impact would it have?</p> <p>16     And so the purpose of Table 7 is not in</p> <p>17     any way to demonstrate the strengths of the</p> <p>18     association, which is a requirement to assess for</p> <p>19     Bradford Hill --</p> <p>20     Q Would your --</p> <p>21     MR. LAPINSKI: She's not finished --</p> <p>22     A -- but how many --</p> <p>23     MR. LAPINSKI: -- Counsel.</p> <p>24     A -- but --</p> <p>25     MR. ZELLERS: Okay. Counsel, one lawyer</p>	<p>1      fine.</p> <p>2      MR. ZELLERS: Please don't interrupt</p> <p>3      the --</p> <p>4      MS. O'DELL: That's --</p> <p>5      MR. ZELLERS: -- deposition.</p> <p>6      MR. LAPINSKI: -- better. Thank you.</p> <p>7      MR. ZELLERS: Ms. O'Dell is doing a</p> <p>8      fabulous job of making objections --</p> <p>9      MR. LAPINSKI: Yes, she is.</p> <p>10     MR. ZELLERS: -- for all of you.</p> <p>11     Q (BY MR. ZELLERS) Okay. Doctor. You were</p> <p>12     trying --</p> <p>13     MS. O'DELL: Excuse me. I don't -- still</p> <p>14     don't think she was finished.</p> <p>15     MR. ZELLERS: Okay.</p> <p>16     MS. O'DELL: So you may continue, Doctor.</p> <p>17     If you were finished, great. If you weren't, you</p> <p>18     may finish your answer.</p> <p>19     A I -- I'm going to have to say I -- I -- so</p> <p>20     the -- the -- Table 7 is an illustration of the</p> <p>21     number of women who would be impacted.</p> <p>22     And the point was to explain that the</p> <p>23     strength of the association is separate from the</p> <p>24     number of women impacted. But indeed, it</p> <p>25     illustrates how important the number of women</p>
<p>1      can object. Okay. I don't want all of you</p> <p>2      objecting.</p> <p>3      MR. LAPINSKI: Don't -- don't raise your</p> <p>4      voice to me.</p> <p>5      MR. ZELLERS: No. I don't want all of you</p> <p>6      objecting.</p> <p>7      MR. LAPINSKI: Counsel, if you want to</p> <p>8      make a statement --</p> <p>9      MR. ZELLERS: Yeah --</p> <p>10     MR. LAPINSKI: -- make a statement.</p> <p>11     MR. ZELLERS: -- I'm making a statement</p> <p>12     that I do not want --</p> <p>13     MR. LAPINSKI: That's --</p> <p>14     MR. ZELLERS: -- the whole group of</p> <p>15     lawyers --</p> <p>16     MR. LAPINSKI: -- and you --</p> <p>17     MR. ZELLERS: -- on the Plaintiffs' side</p> <p>18     objecting.</p> <p>19     MR. LAPINSKI: -- I'm sitting directly</p> <p>20     across the table from you. And I can hear you, and</p> <p>21     I have heard you all day.</p> <p>22     MR. ZELLERS: Okay.</p> <p>23     MR. LAPINSKI: I have heard you carry on</p> <p>24     the way you have carried on all day. There's no</p> <p>25     reason to raise your voice to me. I can hear you</p>	<p>1      impacted is.</p> <p>2      Q Let's go through your math.</p> <p>3      A Yes.</p> <p>4      Q So the table, Table 7, includes several</p> <p>5      assumptions; is that right?</p> <p>6      A A great number of assumptions.</p> <p>7      Q You ran the data, assuming that 10 percent</p> <p>8      of the female population in the United States used</p> <p>9      talcum powder products regularly, as you define</p> <p>10     "regularly"; is that right?</p> <p>11     A Just to clarify, I -- I demonstrated what</p> <p>12     the impact would be if we estimated the number of</p> <p>13     women at 10 percent.</p> <p>14     Q You did the same calculation for</p> <p>15     20 percent and 30 percent; is that right?</p> <p>16     A Yes, I did.</p> <p>17     Q You don't actually know what percentage of</p> <p>18     women use talcum powder products regularly --</p> <p>19     A I --</p> <p>20     Q -- correct?</p> <p>21     A -- I do not.</p> <p>22     Q All right. The calculation -- or your</p> <p>23     conclusion is that .14 percent of women exposed to</p> <p>24     talcum powder products have invasive serous cancer.</p> <p>25     And I am looking at your 10 percent assumption that</p>

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<p>1 you make.</p> <p>2 Did you mean .14 or did you mean for that</p> <p>3 to be 14 percent?</p> <p>4 A So I -- I take your correction as a -- as</p> <p>5 correct.</p> <p>6 Q Okay.</p> <p>7 A I do mean 14 percent, but -- but it's not</p> <p>8 the way you have interpreted it.</p> <p>9 The -- the -- the calculation -- the</p> <p>10 columns are the percent of invasive cancer that is</p> <p>11 attributable to talcum powder, not the proportion of</p> <p>12 cancer -- the proportion of women exposed who will</p> <p>13 develop cancer. Those are very different.</p> <p>14 Q I'm not sure I understand. Your column</p> <p>15 here says, The percent of invasive serous cancer in</p> <p>16 women exposed to talcum powder products; is that</p> <p>17 right?</p> <p>18 A That is correct.</p> <p>19 Q Okay. The universe of talcum powder</p> <p>20 products, which you're estimating here -- and I</p> <p>21 understand it's an estimation -- is 10 percent of</p> <p>22 the population; is that right?</p> <p>23 MS. O'DELL: Object to the form.</p> <p>24 A I -- I -- I'm estimating in this</p> <p>25 table that 10 percent of women use talcum powder --</p>	<p>1 women get ovarian cancer. That would be five</p> <p>2 million women.</p> <p>3 I'm saying if we look at the world of</p> <p>4 invasive serous cancers in the United States, there</p> <p>5 will be in the ballpark of 11,000 serous cancers</p> <p>6 every year in the United States.</p> <p>7 Of those, 14 percent of those will occur</p> <p>8 in regular users of talc powders. 86 percent will</p> <p>9 occur in nonregular talc users.</p> <p>10 So you're interpreting what is listed as a</p> <p>11 column percent. It says, Percent of invasive serous</p> <p>12 cancer in women exposed to talc products.</p> <p>13 You're interpreting that as if I'm saying</p> <p>14 that the women exposed, that 15 percent of them will</p> <p>15 get ovarian cancer.</p> <p>16 Q And in fact, if -- if your caption is</p> <p>17 right, if we really are looking at the percent of</p> <p>18 invasive serous cancer in women exposed to talcum</p> <p>19 powder products, it would be less than .01 percent,</p> <p>20 right?</p> <p>21 A Um --</p> <p>22 MS. O'DELL: Object to the form.</p> <p>23 A -- you -- you're asking me how many women</p> <p>24 with exposure will end up getting?</p> <p>25 Q (BY MR. ZELLERS) Yes.</p>
<p style="text-align: center;">Page 231</p> <p>1 Q (BY MR. ZELLERS) Right.</p> <p>2 A -- products in the U.S.</p> <p>3 Q There are approximately -- what do you say</p> <p>4 -- 30 --</p> <p>5 A 311 million.</p> <p>6 Q -- all right. So 311 million. And you</p> <p>7 are estimating for purposes of this exercise that</p> <p>8 31,100,000 are regular users; is that right?</p> <p>9 A Yes.</p> <p>10 Q And what you are trying to determine is of</p> <p>11 those 31,100,000, what percent of regular talc users</p> <p>12 will have invasive serous cancer, correct?</p> <p>13 A Yes.</p> <p>14 Q And you have calculated 14 percent; is</p> <p>15 that right?</p> <p>16 A No.</p> <p>17 Q It's wrong, right?</p> <p>18 A The way you are describing it is wrong.</p> <p>19 But I can give you an example to help you understand</p> <p>20 that table.</p> <p>21 Q Well --</p> <p>22 A The number of cancers, we're talking about</p> <p>23 31 million women or women who were exposed to</p> <p>24 cancers.</p> <p>25 I'm not saying 13 -- 14 percent of those</p>	<p style="text-align: center;">Page 233</p> <p>1 A So that's a -- a good number. It's not</p> <p>2 one I presented, but certainly one I can estimate,</p> <p>3 which is -- if we're talking about 31 million women</p> <p>4 who have regular exposure and of those who will</p> <p>5 get -- I'm scribbling on my exhibit. I hope that's</p> <p>6 okay. Is that okay? One, two, three -- one, two,</p> <p>7 three. One -- one out of -- one out of 3,000 women</p> <p>8 will get --</p> <p>9 Q So --</p> <p>10 A -- ovarian cancer.</p> <p>11 Q -- approximately .01 percent, correct?</p> <p>12 A That sounds pretty good, actually.</p> <p>13 Q All right. Dose response. A significant</p> <p>14 number of the talcum powder studies that you looked</p> <p>15 at do not show a dose response or fail to account</p> <p>16 for dose response altogether; is that right?</p> <p>17 A In my summary of dose response on page 39,</p> <p>18 I note that Penninkilampi, one of the large</p> <p>19 meta-analyses, which I think is the most</p> <p>20 comprehensive review, talks about dose response.</p> <p>21 I didn't cite here -- and it was an</p> <p>22 oversight -- Berge, another large comprehensive</p> <p>23 meta-analysis, also shows dose response.</p> <p>24 So the two systematic reviews showed dose</p> <p>25 response. I also list Terry as showing dose</p>

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<p>1 response. That's the pool data of a large number of 2 studies. Those are, you know, both quite -- I -- I 3 have covered most of the publications, so those show 4 dose response.</p> <p>5 There are a few others that I show. There 6 are definitely a bunch that do not address the issue 7 of dose response, but -- but I wouldn't characterize 8 it as most do not.</p> <p>9 Q Well, you state on page 40 of your report 10 with respect to dose response, The results are 11 inconsistent and more importantly are not considered 12 or assessed in most of the published studies.</p> <p>13 A That was your conclusion with respect to 14 dose response; is that right?</p> <p>15 Q You are going to have to tell me where 16 you're reading. What I'm reading says, In summary, 17 most, but not all, studies of talcum powder products 18 in ovarian cancer show a dose response.</p> <p>19 THE COURT REPORTER: Slow down when you 20 read, please.</p> <p>21 A I'm so sorry.</p> <p>22 Q In summary, most, but not all, studies of 23 talcum powder products in ovarian cancer show a dose 24 response. Most do.</p> <p>25 A But the results are inconsistent and more</p>	<p>1 A Yes. 2 Q Would you agree that generally when you 3 looked at the published studies, that they showed an 4 association of around 1.3 between perineal talc use 5 and ovarian cancer? 6 A I think many of the studies showed an 7 association of about 1.3 of any talc use. Not 8 quantifying the amount of exposure. 9 Q But would you agree that an -- that 10 epidemiologists generally consider a 1.3 odds ratio 11 in a case-control study to be a weak or modest 12 association? 13 MS. O'DELL: Object to the form. 14 A I am -- I am unaware what -- of what most 15 epidemiologists think. 16 Q (BY MR. ZELLERS) Have you seen any peer 17 reviewed literature on talc and ovarian cancer that 18 states that 1.3 is a strong association? 19 A I mean, Penninkilampi concludes there's a 20 consistent association between perineal talc -- talc 21 use and ovarian cancer. 22 A And I'm just looking for how he quantifies 23 that. He concludes the results indicate that 24 perineal talc use is associated with a 24 to 25 39 percent increased risk of ovarian cancer.</p>
<p style="text-align: center;">Page 235</p> <p>1 importantly are not considered assessed in most -- 2 that -- that should not say "most." It should say 3 "in many of the published studies." 4 Q (BY MR. ZELLERS) All right. So you would 5 amend your report from "most" to "many; is that 6 right? 7 A I -- I used "most" twice in the same 8 sentence as meaning different things. So yes, I -- 9 Q Go -- 10 A -- it was an error. 11 Q -- Gertig 2000 study found that there was 12 no increase in risk of ovarian cancer with 13 increasing frequency of use; is that right? 14 A I would have to check that, but I'm happy 15 to do so. I believe that's correct. 16 Q Hunchcharek 2003 found that the data 17 showed a lack of clear dose response relationship, 18 making the relative risk of questionable validity; 19 is that right? 20 A Which -- which one? 21 Q Sure. Hunchcharek 2003, page 19 of 55. 22 A Wait. This one is 2011. I don't -- I 23 don't think I have that one. 24 Q All right. Consistency. Consistency is 25 another factor that you looked at; is that right?</p>	<p>1 He doesn't quantify it as weak or strong, 2 but there's a suggestion that a 39 percent increase 3 is important. But he -- he doesn't quantify it. So 4 I would have to look through the authors' 5 conclusions. 6 Q Do you know who Penninkilampi is? 7 A I do not. 8 Q Do you know that he is a medical student? 9 A I'm very impressed. He did a beautiful 10 review. 11 Q Do you know who Guy Eslick is, the other 12 author on that paper? 13 A I do not. 14 Q Do you know if he's an expert for the 15 Plaintiffs in the talc litigation? 16 A I -- I do not. 17 MS. O'DELL: Object to the form. 18 Q (BY MR. ZELLERS) Does Mr. Eslick disclose 19 or identify that he is working for or has worked for 20 Plaintiffs in the talc litigation? 21 A I might -- I don't know the answer to 22 that. 23 Q You would expect that if that was true, 24 that there would be a disclosure of that; is that 25 right?</p>

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<p>1       A I --</p> <p>2       MS. O'DELL: Object to the form.</p> <p>3       A -- it's published in a very high-impact,</p> <p>4       high-quality medical journal, and I would suspect</p> <p>5       that that would be required of that journal.</p> <p>6       But -- but I -- I -- I don't -- I --</p> <p>7       I don't know that journal's requirements, but I</p> <p>8       would suspect that they would require reporting</p> <p>9       funding.</p> <p>10      Q You --</p> <p>11      A It says -- I'm sorry. It says, The</p> <p>12      authors report no conflicts of interest and have not</p> <p>13      reported funding.</p> <p>14      And typically when you have to reporting</p> <p>15      conflicts of interest in the same area, you also</p> <p>16      report funding, and I don't see any of that.</p> <p>17      Q The cohort studies. There are four cohort</p> <p>18      studies; is that right?</p> <p>19      A Yes.</p> <p>20      Q All right. You rely only on the Gertig</p> <p>21      study, the 2000 study; is that right --</p> <p>22      MS. O'DELL: Object to the form.</p> <p>23      Q (BY MR. ZELLERS) -- of those four?</p> <p>24      MS. O'DELL: Excuse me. Object to the</p> <p>25      form.</p>	<p>1       are summarized the way you summarized them. And I</p> <p>2       think if you look at them a little more closely, I</p> <p>3       would not make that conclusion. So --</p> <p>4       Q For the reasons set forth in your report?</p> <p>5       A It's in my report.</p> <p>6       MR. ZELLERS: All right. Let's take a</p> <p>7       break.</p> <p>8       THE VIDEOGRAPHER: We're off the record.</p> <p>9       The time is 3:58 p.m.</p> <p>10      (A break was taken from 3:58 p.m. to</p> <p>11      3:58 p.m.)</p> <p>12      (Next portion not on video record.)</p> <p>13      MR. ZELLERS: So we are back on the</p> <p>14      written record, but not the video record. My</p> <p>15      understanding is that, you know, we are taking a</p> <p>16      break as an accommodation to the witness, and that</p> <p>17      that's fine, but that, you know, you are not going</p> <p>18      to use this time to further meet and prepare the</p> <p>19      witness based upon the questions I asked today.</p> <p>20      MS. O'DELL: Correct. There's --</p> <p>21      there's -- Dr. Smith-Bindman is taking this break</p> <p>22      because she is still recovering from her concussion.</p> <p>23      There will be no meeting with</p> <p>24      Dr. Smith-Bindman. I do want to point out counsel</p> <p>25      for J&amp;J seems to have dictated this requirement in</p>
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<p>1       A My report summarizes all four of them, and</p> <p>2       that all went into the weight of my report.</p> <p>3       In terms of being included in any</p> <p>4       systematic review, only one of them was included in</p> <p>5       the systematic review.</p> <p>6       Q (BY MR. ZELLERS) If you looked just at the</p> <p>7       cohort studies --</p> <p>8       A Yes.</p> <p>9       Q -- you would not find a statistically</p> <p>10      significant association between perineal talc use</p> <p>11      and ovarian cancer, correct?</p> <p>12      MS. O'DELL: Object to the form.</p> <p>13      A I --</p> <p>14      MS. O'DELL: Excuse me. When -- when you</p> <p>15      get to a good stopping point, it would be good to</p> <p>16      take a break --</p> <p>17      MR. ZELLERS: Okay.</p> <p>18      MS. O'DELL: -- but whenever you're -- if</p> <p>19      you have a few more minutes, that's fine, but</p> <p>20      whenever you get to a good point.</p> <p>21      A -- so I summarize my view of the cohort</p> <p>22      studies, which are not exactly what you -- what you</p> <p>23      just summarized -- the way you just summarized them</p> <p>24      on page 21.</p> <p>25      So I think that often the cohort studies</p>	<p>1       order to accommodate the witness's situation.</p> <p>2       But I would just note the deposition</p> <p>3       protocol has no such restriction, and -- and so</p> <p>4       that -- to that degree, I would say we have no</p> <p>5       intent to prepare the witness any further.</p> <p>6       But we're not restricted from talking to</p> <p>7       the witness, and I don't want the record to suggest</p> <p>8       otherwise.</p> <p>9       MR. ZELLERS: We will see you tomorrow.</p> <p>10      MS. O'DELL: Thank you.</p> <p>11      THE VIDEOGRAPHER: We are back on the</p> <p>12      record at 4:01 p.m., and this is the end of Disc</p> <p>13      No. 4 in today's testimony of Dr. Rebecca</p> <p>14      Smith-Bindman. The time is 4:01 p.m.</p> <p>15      (TIME NOTED: 4:01 p.m.)</p>

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1	I, REBECCA SMITH-BINDMAN, M.D., VOLUME I, do hereby declare under penalty of perjury that I have read the foregoing transcript; that I have made any corrections as appear noted, in ink, initialed by me, or attached hereto; that my testimony as contained herein, as corrected, is true and correct.	1 ERRATA SHEET 2 Golkow Litigation Services 3 1650 Market Street, One Liberty Plaza, 51st Floor 4 Philadelphia, Pennsylvania 19103 5 877-370-3377 6 CASE: Talcum Powder Litigation 7 PAGE LINE FROM TO 8 _____ 9 _____ 10 _____ 11 _____ 12 _____ 13 _____ 14 _____ 15 _____ 16 _____ 17 _____ 18 _____ 19 _____ 20 _____ 21 REBECCA SMITH-BINDMAN, M.D., VOLUME I 22 Subscribed and sworn to before me 23 this _____ day of _____, 2019. 24 _____ 25 Notary Public
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15	REBECCA SMITH-BINDMAN, M.D. VOLUME I	16
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1	I, MARY J. GOFF, CSR No. 13427, Certified Shorthand Reporter of the State of California, certify;	
2	That the foregoing proceedings were taken before me at the time and place herein set forth, at which time the witness declared under penalty of perjury; that the testimony of the witness and all objections made at the time of the examination were recorded stenographically by me and were thereafter transcribed under my direction and supervision; that the foregoing is a full, true, and correct transcript of my shorthand notes so taken and of the testimony so given;	
3	That before completion of the deposition, review of the transcript ( ) was (XX) was not requested: ( ) that the witness has failed or refused to approve the transcript.	
4	I further certify that I am not financially interested in the action, and I am not a relative or employee of any attorney of the parties, nor of any of the parties.	
5	I declare under penalty of perjury under the laws of California that the foregoing is true and correct, dated this day of , 2019.	
6	MARY J. GOFF	